

MOTOR AGE

WINNER IN EACH CLASS AT HARRISBURG

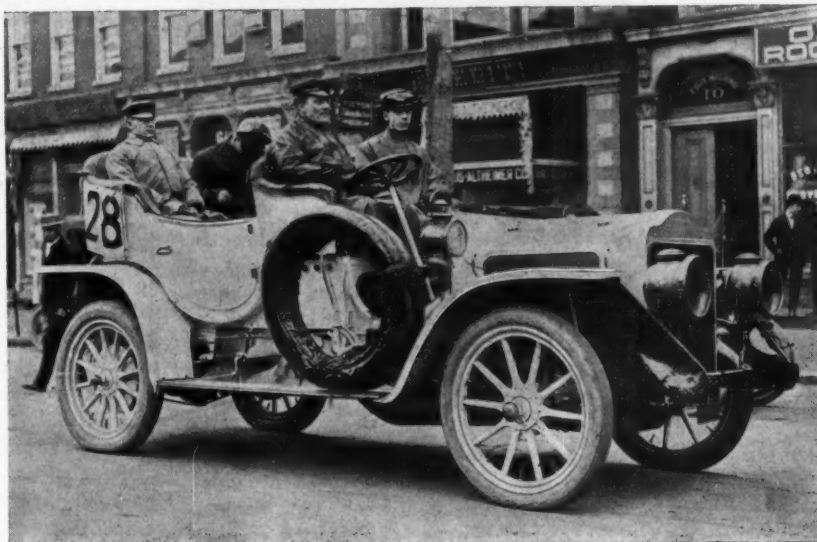
HARRISBURG, PA., May 6—Special telegram—At 2 o'clock this morning, after 7 hours' hard work, the technical committee of the Motor Club of Harrisburg decided that the White, driven by Walter White, won the class A cup in the club's second annual endurance run with a perfect score. The win carries with it a victory in the run-off of last year's tie—the first double-headed triumph that is known in the annals of motoring.

When the extremely critical examination is taken into consideration, the victory is all the more creditable. Before arriving at the verdict each of the even score of cars turned over to the committee was tested on a near-by hill for brake efficiency; clutches were tested by putting front wheels against a high curb to see if the rear wheels would spin; both ignition systems were gone over, transmissions were tried for defects in gear-working; every wheel, axle, spring, frame, motor and gearset was examined.

The Mitchell car won the class for cars at less than \$2,250, it receiving a total penalization of two points, one imposed for a leaking connection between the top of one cylinder jacket and the return pipe to the radiator and the other for a lost nut off the exhaust manifold at the point where the manifold joins with the pipe leading to the muffler. In other respects the car had a perfect score in its road performance.

The winner in class D for runabouts costing less than \$2,000 was a Pullman entered by C. C. Cumbler, a private owner and driven by himself. This car had a perfect score, not receiving a point against it in the searching technical examination it was subjected to, nor in the outside test of brakes, motor, gears, ignition clutch, etc. The car also had a perfect road score.

Second honors in the class D runabout



WALTER C. WHITE IN WINNING WHITE STEAMER IN CLASS A

group went to a three-cylinder two-cycle Atlas entered by the West-Stillman Co., of Philadelphia, and driven by F. K. Mears. It had a total penalty of 156 points, 141 of which were for being late at controls, due in no small regard to five punctures. The technical examination brought fifteen points, three for a battery being out of commission and the other points for loose mud apron, loose bolts in frame, spring slipping in seating and muffler tail pipe being lost. The motor of this car was in particularly good condition.

Next to the Atlas came Maxwell number 20, entered and driven by John Sellers, with a total count of 212 against it, eighty for being late at controls and sixty-six for work done on the car on the road and sixty-six for the technical examination. The technical examination penalties covered such points as loose fender bolt, front axle bent, steering knuckle tie rod bent, slipped spring clip and loose compressing grease cup.

WINNERS AT HARRISBURG

Class A—White steamer	Perfect
Class B—Mitchell	2 points
Class C—Pullman	6 points
Class D—Pullman	Perfect

Fourth place was won by a Ford runabout with 446 points against it, distributed as follows: 243 for being late on the second day, caused by getting stalled on the road a short distance out of Philadelphia, after which Driver Jones had to send to Philadelphia for a new unit for the coil, which took up all of the time. In spite of a delay of 1 hour 20 minutes, the little car was 10 minutes ahead of time at the end of the day, 243 points being for work done in finding the trouble with the ignition system. Ninety-six

points were added in the final examination, ninety-five of them being for a broken brake-applying rod and one for a leaky water connection to one of the cylinders. Last place went to Cocklin's Pullman with 479 points, 450 on the road and 29 for the technical examination and outsider unning test.

The order of finish in class B, which was won by the Mitchell, follows: Redman's number 19 Maxwell, 6 points; Bender's Maxwell number 21, 25 points; Max Graupner's Pullman, 51 points; Thorley's Cadillac, 80 points. The Maxwell's six points were: Water connection leaks, grease cup lost, screw lost out of differential housing and lost muffler part. Bender's Maxwell lost points because of leaky oil connection fan belt, leak in radiator, compression grease cup loose, front spring shackle turned and emergency brake poor. The fifty-one points against the Pullman were due to loose steering gear, having broken exhaust manifold, lost grease cup and frame bolt loose. The Cadillac difficulties consisted of all the leaves in the left front spring being broken, broken mud guard, bent tie rod between steering knuckles and lost bolt.

In the final revision of the penalties of the first day it was discovered that penal-

ties had not been added for the stopping of the Stoddard-Dayton motor while it stopped for cleaning the carbureter and finding trouble in the ignition system. It got 120 points additional, bringing its total up to 189 points.

Harrisburg and Philadelphia people are jubilant over the result of the 2 days' run, which placed a White, two Pullmans and a Mitchell as the winners of the four classes. The people have a right to be jubilant, due to the fact that of the twenty-six cars that started out Monday morning, twenty were on hand at the finish to take the technical examination and the outside test. Of these twenty, only two had perfect scores, the White steamer and the Pullman runabout. Of the six that failed to finish hard luck was against a few of them. Two, a Jackson and Cadillac, were prevented from finishing by the drivers being arrested in Reading and being detained over night. The Pierce, which had a clean score up to within an hour of the finish, had some clutch trouble and could not check in. The others not finishing were the Stoddard that broke a wheel the first day; the Elmore and the little two-cylinder Jackson that ran up against unusual tire troubles. Little trouble followed the findings of the technical examination, the contestants all accepting the committee finding with good grace, realizing, as they did, the justice of them.

First Day's Journey

Philadelphia, Pa., May 4—Eleven of the twenty-six cars which started from Harrisburg this morning in the second annual endurance run of the motor club of that city arrived here this afternoon with clean scores. Five other cars also claim to be clean, but the contest committee has discovered that they checked in ahead of time at Easton, and pending an investigation has refused to grant them the coveted 0 in the penalty schedule column. Only one car has been withdrawn, A. J. Hamilton's



IRVIN IN THE BIG PULLMAN

Stoddard-Dayton, which lost a wheel in making a sharp turn some miles out of Doylestown. One of the three contenders for last year's class A cup, which was retained by the club owing to a four-cornered tie, fell by the wayside. Robert Morton's Pullman having garnered sixty-one demerits. The battle for that cup is now between Arthur Kumpf and Walter White, both of whom also have a chance of annexing this year's class A emblem.

The surprise of the day was the remarkable performance of A. A. Jones' Ford and the Jackson of J. S. Trego, both of which negotiated the 175-mile course without faltering and reporting at all controls ahead of time.

It rained for half an hour before the start from Harrisburg, and there was a great scurrying about for waterproofs, which, fortunately, were not needed, as J. Pluvius accommodatingly changed his

mind, although he did act in a threatening manner all day long. The moisture-shedders were of some use, however, for they came in handy as additional protection against a nasty, bleak, Novemberish head wind which persisted throughout the run.

Those who had participated in last New Year's day run of the Quaker City Motor Club—and those who hadn't—were looking forward with misgiving to those portions of the route which had sent so many clean scores a-glimmering in the Quakers' run. The conditions were vastly different today. The roads, even in the bad places, were negotiable at a 15-mile rate, and by "beating it" on the many good stretches the bugaboos were disposed of with something to spare.

Only one real accident was reported during the day. A. J. Hamilton's Stoddard-Dayton, number 11, driven by Howard Hodson, skidded into a wall while taking a sharp turn just outside of Doylestown, and while the mix-up put the car out of the clean-score, neither Hamilton nor Hodson was hurt.

Tire troubles were not unreasonably frequent during the run, the greatest sufferer in this respect being the 1905 Franklin 20, which the Central Pennsylvania Automobile Co. loaned the committee for a press car. Fully a dozen punctures were suffered by the pressmen's car, and it fell so far behind that it became necessary to cut the course, running direct from Reading to Philadelphia, and at that the car was not garaged until after 6:30.

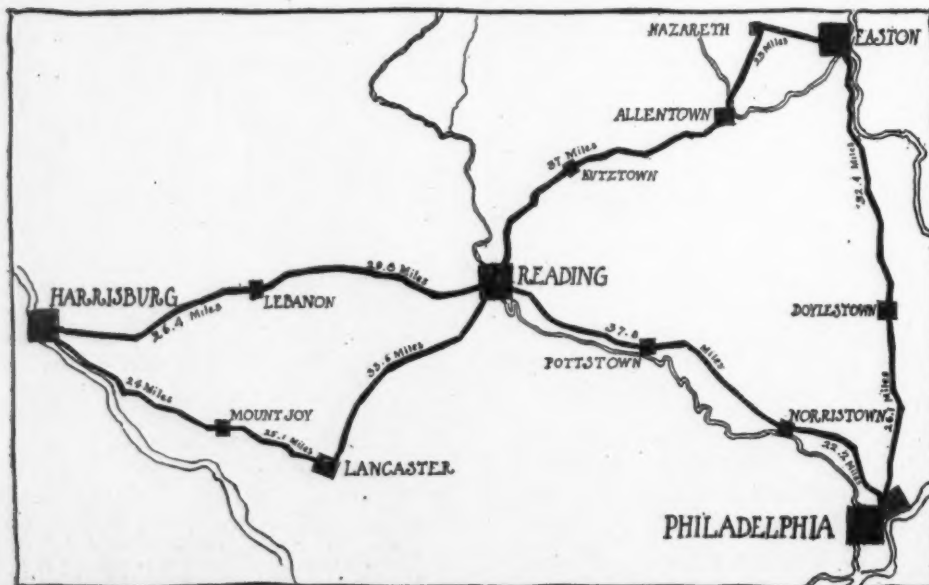
The first car to show up at today's finish was E. G. Irvin's class C Pullman, which arrived at the White garage on the dot at 4 o'clock, 20 minutes ahead of time. J. S. Trego's class D Jackson followed a few minutes later and then there was an interval of 10 minutes before another car materialized, but it was the head of a procession of the contestants.

The schedule showing the distances and the time allowances for the first day's run follows:

	Dis.	Total Dis.	Time
Harrisburg to Lebanon...	26.4	26.4	1:20:00
Lebanon to Reading.....	29.8	56.2	1:30:00
Reading to Allentown.....	37	93.2	1:50:00
Allentown to Easton.....	23	116.2	1:10:00
Easton to Doylestown.....	32.4	148.6	1:35:00
Doylestown to Philadelphia.....	26.1	174.7	1:25:00

The controls for the first day were established at the Patriot office, Harrisburg; the Eagle house, Lebanon; Mansion house, Reading; Allen house, Allentown; Soldiers' monument, Easton; Monument house, Doylestown, and the White garage, Philadelphia.

The twenty-six entrants were divided into four classes—class A, for touring cars costing \$2,250 and over; class B, for touring cars costing less than \$2,250; class C, for runabouts catalogued at \$2,000 and over, and class D, for runabouts priced at less than \$2,000. With the exception of class A, in which there were six entries, each class had seven starters. For these four classes the committee hung up five beautiful cups.



MAP SHOWING ROUTE FOLLOWED IN HARRISBURG RUN

Not a few famous drivers were "on the job," all the manufacturers evidently being aware that a win under the severe conditions means something. Arthur Kumpf, the youngest driver in last year's Glidden tour, and who brought his Pierce-Arrow through that strenuous contest with a clean score, was at the wheel of H. F. Rawl's Pierce. Walter White drove his big White, and Robert Morton, who came into the limelight some months ago, when he beat the Studebaker in a mud run from Philadelphia to Savannah, guided E. G. Irvin's Pullman. This trio, besides being out for the class A honors in the present run, were after the 1907 cup in the same class, for which all three qualified but which was held up by the committee owing to the fact that the four claimants could not come to an agreement as to its disposition. The only absentee of the four was S. K. Hamburger's Thomas.

The result of today's strenuous road test is summarized by the club's technical committee in the following table:

No.	Class	Car	Penalties—	
			On schedule	On seals and work
2-D	Jackson	.....	0	0
4-C	Pullman	.....	0	0
7-A	Pullman	.....	0	0
8-C	Pullman	.....	0	0
18-A	Pierce-Arrow	.....	0	0
22-B	Mitchell	.....	0	0
23-B	Cadillac	.....	0	0
24-D	Ford	.....	0	0
25-C	Rambler	.....	0	0
27-C	Pennsylvania	.....	0	0
28-A	White	.....	0	0
12-D	Pullman	.....	*	0
16-A	Thomas	.....	*	0
19-B	Maxwell	.....	*	0
17-C	Apperson	.....	*	0
10-A	Stoddard-Dayton	.....	0	Incomplete
21-B	Maxwell	.....	2	0
14-D	Atlas	.....	0	0
6-B	Pullman	.....	0	11
3-B	Jackson	.....	0	15
15-B	Elmore	.....	51	Incomplete
5-A	Pullman	.....	6	55
20-D	Maxwell	.....	80	66
9-D	Pullman	.....	88	325
1-D	Cadillac	.....	203	439
11-C	Stoddard-Dayton	.....	Out after Easton	
26-C	Rambler	.....	Did not start	

*Nos. 12, 16, 17 and 19—Report of checker at Easton shows that these cars checked in ahead of schedule.

The contestants all retired early in order to be prepared for the final struggle to-



ONE OF THE MAXWELLS

morrow, which is expected to produce winners in each of the classes.

History of the Second Day

Harrisburg, Pa., May 5—The conditions today were even better than yesterday, a bright sun tempered by a cool breeze making the sport more of a pleasure party. The schedule was a trifle fast for some of the smaller fellows, but unless in case of accident, the 20-miles-an-hour limit on which it was based proved not too severe.

When the twenty-four remaining cars checked out of the White garage there was a great scurrying for gasoline, while the rapid clank of tire tools was evident on all sides. It was a case of rush, for all time consumed in these necessary operations came out of the 75 minutes allowed to cover the 22.2 miles to Norristown.

The Stoddard-Dayton entries had extremely hard luck. The class C car was

put out yesterday by a smashed wheel, and today Shirk could not get the motor going on the class A entry. He fumed and sweated at the White garage for a trifle over an hour after being given the word, but when he got going he drove to such purpose that at Reading, 60 miles, he was only 5 minutes behind his schedule. The remaining controls he negotiated ahead of time.

Several clean scores of yesterday were eliminated today, chief among which was the Pierce-Arrow driven by Arthur Kumpf. Just as he was leaving Columbia the Pierce's differential broke, penalizing it both on a road and technical basis, and leaving the White the sole clean-scorer.

Number 23, S. Thorley's class B Cadillac, went into the road penalty column through the medium of a broken spring. Number 2, J. S. Tregos' Jackson, lost its 0 when the ring locking its left rear tire snapped and went flying into the field at the side of the road. Trego sent back 11 miles to Philadelphia for a new one, and came in through the rain long after the officials had gone to supper. A. A. Jones' Ford developed battery troubles while yet within the Philadelphia limits and lost an hour ere a 'phone message brought him relief. He "beat it" in pursuit of the run after getting things straightened out and reported at the finish 5 minutes ahead of time. E. G. Irvin's class C Pullman, number 4, which was the first car into every control on both days, and had a clean road score all but made, fell from grace 10 miles from the home stake. The hose connecting the waterjacket and the cooler slipped off, and the engine began to heat up. To get at the trouble it became necessary to break the seal and raise the bonnet. Irvin was figuring in the penalty column tonight. The mix-up yesterday at Easton over the checker having ordered four of the contestants off before the scheduled time was ignored by the committee and the demerits tacked on the Stoddard-Dayton for opening the hood to oil the cylinder were removed.

RESULTS OF THE 2-DAY RELIABILITY TEST OF THE MOTOR CLUB OF HARRISBURG

CLASS A, FOR TOURING CARS COSTING \$2,250 AND OVER										
Name of car	Cyl.	H. P.	Cyl. bore	Piston stroke	Car model	Entrant	Driver	—Final standing—		
								Road	Tech.	Total
5—Pullman	4	40	4 3/4	5	G	1907 E. G. Irvin	Robert Morton	65	0	65
7—Pullman	4	40	4 15-16	5 1/8	J	1908 J. A. Kline	J. A. Kline	61	60	121
10—Stoddard-Dayton	4	45	4 3/4	5	F	1908 A. J. Hamilton	Robert Shirk	189	0	189
16—Thomas	4	60	5 1/2	5 1/2	36	1907 Fred Moslein	C. C. Fairman	0	15	15
18—Pierce-Arrow	4	40-45	5	5 1/2		1907 H. F. Rawl	Arthur Kumpf			
28—White	2	30				1908 Walter C. White	Walter C. White	0	0	0
CLASS B, FOR TOURING CARS COSTING LESS THAN \$2,250										
3—Jackson	2	20-24	5 1/4	5	C	1907 C. A. Doehne	Chester Smith			
6—Pullman	4	20	3 3/4	3 3/4	H	1908 Max Graupner	Max Graupner	0	51	51
15—Elmore	3	24	4 1/2	4	16	1908 A. D. Miller	A. D. Miller			
19—Maxwell	4	24	4 1/4	4 1/2	D	1907 Andrew Redmond	Charles Fleming	0	6	6
21—Maxwell	2	20	5	5	HB	1907 Andrew Redmond	Andrew Bender	0	25	25
22—Mitchell	4	35	4 1/2	5	I	1908 Walter M. Cram	Walter M. Cram	0	2	2
23—Cadillac	4	20-25	4	4 1/2	G	1907 S. Thorley	C. C. Crispin	0	80	80
CLASS C, FOR RUNABOUTS CATALOGUED AT \$2,000 AND OVER										
4—Pullman	4	40	4 15-16	5 1/4		1908 E. G. Irvin	E. G. Irvin	9	56	65
8—Pullman	4	40	4 15-16	5 1/8		1908 J. A. Kline	Stuart Lafean	0	6	6
11—Stoddard-Dayton	4	45	4 3/4	5	SK	1908 A. J. Hamilton	Howard Hodson			
17—Apperson	4	50-55	5 1/2	5	Rabbit	1907 C. J. Swain	C. J. Swain	13	5	18
25—Rambler	4	32	4 1/2	4 1/2	34A	1908 A. H. Bitner	A. H. Bitner	0	17	17
27—Pennsylvania	4	50	4 1/4	5 1/4		1908 R. Harry Croninger	L. J. Zengel	0	11	11
CLASS D, FOR RUNABOUTS PRICED AT LESS THAN \$2,000										
1—Cadillac	1	10	5	5	S	1908 I. W. Dill	R. H. Hagerling			
2—Jackson	2	16-18	5	4	F	1908 J. S. Trego	H. G. Zimmerman			
9—Pullman	4	20	3 3/4	3 3/4	E	1907 C. C. Cocklin	C. C. Cocklin	450	29	479
12—Pullman	4	20	3 3/4	3 3/4	H	1908 C. C. Cumber	C. C. Cumber	0	0	0
14—Atlas	3	34	4 1/2	4 1/2		1908 West-Stillman Co.	F. K. Mears	141	15	156
20—Maxwell	2	14	4 1/2	4	LC	1908 John Sellers	John Sellers	146	66	212
24—Ford	4	15-18	3 3/4	3 3/4	N	1907 A. A. Jones	A. A. Jones	350	96	446

DETROIT'S 3-DAY TEST OF STRENUOUS NATURE

DETROIT, MICH., May 2—The Detroit Automobile Dealers' Association gathered tonight at Hotel Tuller and, at an elaborate banquet, celebrated the conclusion of the first annual endurance run of the organization—an event which was the first of its character ever attempted in Michigan and the success of which was beyond expectation. A total of thirty-two cars started from Detroit early Wednesday morning. All but three of them finished the event. Thirteen made the arduous trip of 400 miles over typical Michigan roads, which are never good and were in far from their best condition as the result of heavy spring rains, and did it without so much as a single adjustment or repair, making six controls within schedule time and traveling at an average rate of almost 15 miles an hour.

First honors in the run were won by the local distributor of the Thomas Forty which entered three cars, all of them finishing the run with perfect scores. Of three entries made by the Northern Motor Car Co., two finished with perfect scores and the third suffered a penalty of only one point. Two Oldsmobiles delighted the supporters of this car by perfect performances. Of the rest, the honor roll included a Franklin, a Peerless, a Maxwell, a White, a Pierce-Arrow and a Stoddard-Dayton. In addition were other cars which suffered penalties of a nominal nature only. Nearly all of these were the direct result of the extreme severity of the road conditions. Broken fenders, bent steering rods and adjustments of a minor nature were the causes of the penalties which marred the performances of most of the cars that failed to finish with perfect scores. The observers had been chosen by the contestants themselves and assigned to rival cars—a system which accomplished its desired purpose, for the scoring was extremely well done and only two changes were made by the contest committee which passed on the returns before they



ALLEGED ROAD BETWEEN SAGINAW BAY AND DETROIT

were officially ratified by the committee. The first 6 miles led out Woodward avenue over the asphalt and the police cast an indulgent eye on the clip set by the drivers, all of whom desired to make the most of the fine opportunity for speeding. At Palmer park the Birmingham toll road, famed as the best turnpike in eastern Michigan, stretched out invitingly and here the cars found no necessity for slackening up. Pontiac was made without incident and nobody hesitated. Orion, 10 miles beyond, found the course still fair and it was not till the cars passed Oxford that any really bad roads were encountered. It had rained intermittently for 3 days and the tourists splashed their way through mud and water. Nearing Lapeer the Brush runabout, driven by Lobdell and carrying Conway James, the former Detroit university school football captain, as observer, skidded at a sharp turn, broke a connecting rod as it collided with the railing of a bridge over a ditch and slipped into the water, narrowly escaping a capsize. The accident put the little car out of the test, but it was towed out by one of the rescue cars and brought back to Detroit. The Jackson, which had led the others away from the starting control, had some engine trouble and was penalized for replacing a spark plug. The big Welch, the highest-powered car in the run had trouble with an oiler and lost eleven points. The Pope-Hartford bent its crankshaft while climbing out of a mudhole and the Pedelia Cadillac, which has run over

47,000 miles in the last 3 years, suffered its only penalty of the tour—a replaced spark plug, Driver White making the substitution in the record time of 30 seconds and losing thereby only one point. Scott's Ford runabout experienced another accident of a similar character.

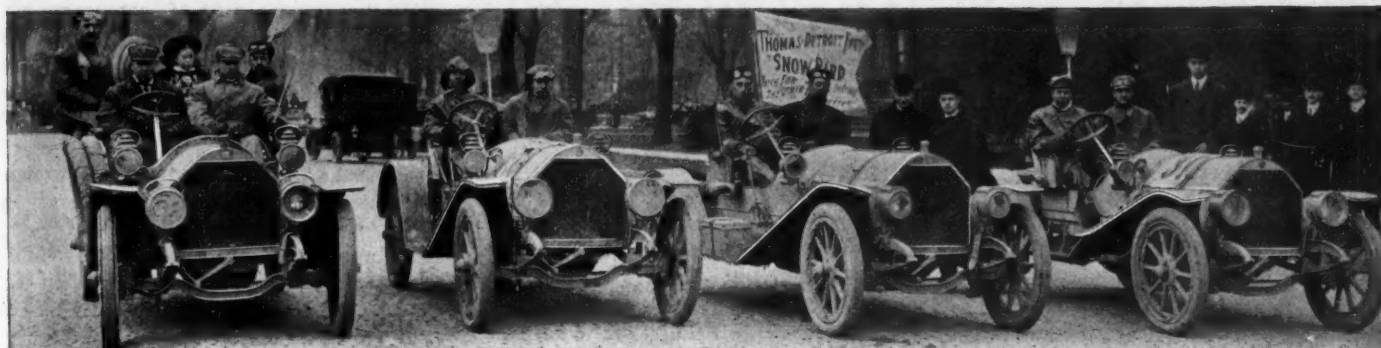
An hour was spent at Flint, where virtually all the cars had chains placed on their tires, and the tourists were started on their way again. The road to

Saginaw was extremely well traveled and little difficulty was experienced en route, the Franklin, closely attended by the Thomas Forty, driven by George Grant, leading the procession into Michigan's Third City. Here A. W. Norris, an enthusiastic Saginaw motorist, appeared and piloted the party to Bay City. Though the distance between these towns was less than 20 miles, some of the worst road along the line of the whole trip was encountered. The big Welch, driven by W. H. V. Neumann, skidded at one dangerous point and only fine driving averted what might have been a serious accident, the car being stopped with the front wheels on the very edge of the ditch, after slipping into a position which entirely blocked the road. Nine cars were held up in a row and there were plenty of offers of assistance, but these Neumann declined and worked out from the situation under his own power alone. The line of march had become considerably scattered by the time Bay City was reached and some of the cars were on their way back to Saginaw, where the night control had been established, before the others had entered Bay City. A collision between a Mitchell and a Stevens-Duryea was averted when Driver Gilmore of the former car drove into the ditch, causing a penalty which was afterward reduced by the contest committee.

The night control had been established at the Hotel Vincent and nearly all the cars checked in on time. The progress of the cars through the cities on the line of



THREE NORTHERN CARS THAT TOOK PART IN THE DETROIT RUN—TWO WERE PERFECT



FLEET OF THOMAS-DETROITS, STARS IN THE MICHIGAN 3-DAY AFFAIR

the tour was marked by a considerable degree of interest on the parts of the residents and at Saginaw in the evening the tourists were guests at a boxing exhibition in which Joe Cherry, once a leading light of the game and an old Detroit favorite, fought a plucky draw with Billy Johnson, a comparatively newcomer to the game.

Leaving Saginaw the route led toward St. Charles over roads which were unfamiliar to most of the tourists, as this region is but little frequented by motorists. The reason was obvious, however, for, before the leaders had gotten 12 miles from the control, the fiercest highway of the entire trip was encountered. Mud and water on top of corduroy formed the material and the little red flags, carried by the confetti car were soon exhausted, marking especially dangerous spots. A typical experience was that of the Cadillac number 4, which was leading the procession. Running hub-deep in mud, the car hit a hidden log. Driver Garland nursed the car as well as he could and got over safely. A second log was taken then, the occupants of the car getting a terrific jounce. Still everything held. Hardly had the passengers gotten settled in their seats again and the car resumed her speed when a third obstacle of the kind was encountered. As the front wheels came down on the far

side of this log the pan of the car hit a sunken stump, which bent one of the steering knuckles and necessitated a stop and repairs, which spoiled what would otherwise have been a perfect record for the run. No fewer than three other cars came to grief on this spot, and this in spite of the fact that the leader had followed his experience by posting a danger signal, carried in the car for just such an emergency. Wardell's little Brush runabout went almost out of sight into a hole and was a long time getting out, while all three Jackson cars suffered penalties. The run was a struggle with conditions of the severest character until Owosso was reached.

From Owosso to Lansing, where the tourists had lunch, and through to Kalamazoo, where the stop was made for the night, the roads verged from good to passable, and a lively clip was maintained. All along the route the population had been informed of the coming of the tourists and turned out to cheer them on. Farmers lined up their horses along the road to accustom them to the sight of the cars. District school teachers dismissed their pupils for an extempore recess the moment the confetti car hove into view. At Charlotte the authorities roped off the main highway in the central portion of the city and placed sentries at the city limits, who

shouted to the drivers to cut loose as much as they chose. The road had been fine for several miles and a lively bit of competition had been in progress between the Pope-Hartford and the Franklin, for the lead. They came into town right together, and Gardham and Houston had it out for the length of the municipality, the former taking a chance at round 50 miles an hour over the cross walks and getting into his accustomed place at the head of the procession, which place he held into the city of Kalamazoo.

Between Battle Creek and Kalamazoo the best road of the day was discovered and this proved a boon to those who had been delayed during the morning. Due to a mistake of the observer in the car, the Stevens big six, under the impression that it was nearly an hour behind time, turned off 10 miles in a little less than 15 minutes, arriving at Kalamazoo about 1 hour 40 minutes ahead of time.

The Kalamazoo control was established at the American house and everybody turned in early, for it had been a hard day. One of the drivers is averred to have waked up Friday morning with his goggles on, but this may have been mere rumor.

A very fair sort of road delighted the tourists all the way from Kalamazoo to Detroit on the final 143 miles of the trip.

STATISTICAL HISTORY OF THE MICHIGAN 3-DAY RELIABILITY RUN LAST WEEK

Name of car	H. P.	Cyl. bore	Piston stroke	Car model	Entrant	Driver	Final standing
Jackson	24	5 1/4	5	2-cyl. R.	Seldner-Miner Auto Co.	Seidler	Disqualified
Brush	6				Brush Runabout Co.	Lobdell	Out
Pope-Hartford	25-30	4 1/8	5 1/8	4-cyl. T. C.	J. H. Brady Auto Co.	Houston	986 Bent crank
Cadillac	25	4	4 1/2	4-cyl. T. C.	Cadillac Motor Car Co.	Garland	939 Bent steering rod
Cadillac	30-35	4 3/8	5	4-cyl. T. C.	Cadillac Motor Car Co.	White	999 Changed spark plug
Cadillac	25	4	4 1/2	4-cyl. R.	Cadillac Motor Car Co.	Miloch	725 Broken cotter pin
Brush	6				Brush Runabout Co.	Mandell	813 Late at control
Franklin	28	4 1/4	4	4-cyl. T. C.	J. P. Schneider	Davis	1,000
Thomas-Detroit	40	5	4 3/4	4-cyl. T. C.	Grant Bros. Auto Co.	Grant	1,000
Franklin	28	4 1/4	4	4-cyl. R.	Seldner-Miner Auto Co.	McCalmount	Out Stripped gear
Stevens-Duryea	35	3 3/4	4 3/4	6-cyl. T. C.	J. P. Schneider	Schofield	996 Loosened fender
Ford	15	3 1/2	3 3/4	Run	Ford Motor Co.	Scott	989 Valve trouble
Stevens-Duryea	50	4 3/8	5 1/4	6-cyl. T. C.	J. P. Schneider	Young	981 Slipped fan belt
Peerless	30	4 3/8	5 1/2	4-cyl. T. C.	J. H. Brady Auto Co.	Bemb	1,000
Northern	40	5	5	4-cyl. T. C.	Northern Motor Car Co.	E. J. Chapin	1,000
Northern	24	5 1/2	5 1/4	2-cyl. R.	Northern Motor Car Co.	F. J. Chapin	999 Broken mud guard
Maxwell	16-20	5	5	2-cyl. T. C.	Maxwell-Briscoe-McLeod Co.	Bleasdale	688 Late at control
Mitchell	40	5	5	4-cyl. T. C.	Maxwell-Briscoe-McLeod Co.	Gilmore	464 Sheared universal pin
Maxwell	24	4 1/4	4 1/4	4-cyl. T. C.	Maxwell-Briscoe-McLeod Co.	Kelsey	1,000
Thomas Forty	40	5	4 3/4	4-cyl. R.	Grant Bros. Auto Co.	Mochesky	1,000
Welch	75	4 3/8	5	6-cyl. T. C.	William T. V. Newman Co.	Newmann	989 Adjustment
Cadillac	10	5	5	1-cyl. R.	Cadillac Motor Car Co.	Lemmer	992 Valve trouble
White	30		Steam	T. C.	Raymond-Clark Co.	Sheridan	1,000
Ford	15			4-cyl. R.	Ford Motor Co.	Cunningham	943 Wheel trouble
Jackson	45	5 1/4	5	4-cyl. T. C.	Seldner-Miner Auto Co.	Shieffer	618 Late at control
Northern	24	5	5	2-cyl. T. C.	Northern Motor Car Co.	House	1,000
Pierce-Arrow	40	4 1/4	4 3/4	6-cyl. T. C.	J. P. Schneider	Dey	1,000
Oldsmobile	40-45	4 3/4	4 3/4	4-cyl. T. C.	Oldsmobile Co.	Aubel	1,000
Cadillac	10	5	5	1-cyl. R.	Cadillac Motor Car Co.	McMullen	995 Broken muffler
Stoddard-Dayton	45	4 3/8	5	4-cyl. T. C.	Oldsmobile Co.	Lane	1,000
Thomas Forty	40	5	4 3/4	4-cyl. R.	Grant Bros.	Lorimer	1,000
Oldsmobile	40-45	4 3/4	4 3/4	4-cyl. T. C.	Oldsmobile Co.	Crum	1,000

Each car was credited with 1,000 points at the start, the penalizations being deducted.

PROTESTS VANDERBILT CUP RULES

France Makes Formal Objection to Weight Limits Specified by American Automobile Association—International Agreement is the Real Bone of Contention

Paris, April 25—French motor car constructors are almost unanimously of the opinion that the racing board of the American Automobile Association has been wasting its time in the determination of weight limits for the next Vanderbilt cup race. France argues that America accepted the international racing rule adopted as the Ostend conference and ratified at the Paris conference, and that the plain duty of the United States is to abide by those regulations. Constructors declare they are unable to understand the necessity for any change in the weight limits, even those adopted not being in accordance with the Ostend standard, which was fixed at 1,100 kilograms minimum, without water, tires, tools or spare parts.

Not only are individual members of the trade dissatisfied with the Vanderbilt draft received, but the Automobile Club of France has raised its voice in official protest. At the last meeting of the racing board it was decided to oppose the adoption of the outlined Vanderbilt rules, on the ground that America, as one of the contracting parties, was bound to the international conditions. René de Knyff, chairman of the commission sportive of the Automobile Club of France, declares an official protest has been drawn up and will be sent by the next mail to the Automobile Club of America. At the same time a copy of the protest will be sent to every club connected with the international conference.

"Our grounds for protest?" says de Knyff. "They are that an international rule was agreed to at the Ostend conference, that America approved it, and that every nation taking part in that conference is under an obligation to hold no race for cars exceeding a bore of 155 millimeters. Though invited, I believe neither of the American delegates attended the Ostend meeting, at which after a long discussion we agreed to hold no races in 1908 except for cars of a bore not exceeding 155 millimeters, and of a minimum weight of 1,100 kilograms. At the November meeting in Paris the American delegates were present and agreed to these rules. Now we are informed that America intends to break away and cause constructors to build an entirely different set of cars."

It was pointed out that the disruption between the A. A. A. and the A. C. A. might be considered as nullifying the agreement so far as America was concerned. De Knyff appeared to be puzzled by the nomenclature and admitted that the only association that was familiar to him was the A. C. A. "But put aside this question of clubs," he said. "I suppose

the object of the American racing board and of Mr. Vanderbilt is to make a success of the Vanderbilt cup event. How can you do it if you persist in adopting a rule that keeps out all European cars? Expenses in connection with a race are frightfully heavy, and it was entirely with a view to diminishing them that the national clubs got together and decided on a common basis for all the great speed tests. You cannot expect us to build cars specially for the Vanderbilt race, and to compete with our 155-millimeter machines against cars of 170 or 180 millimeters would be folly. The American board is 2 years behind the time, for it has adopted the rules that were in vogue for the first grand prix on the Sarthe in 1906.

"We intend to combat the Vanderbilt conditions. As a club we shall refuse to have any connection with the race if the international rule is not adopted. We cannot prevent French constructors going over to America and competing if they wish to do so, but we can refuse to help them, and we shall certainly wash our hands of the whole affair if America refuses to live up to her agreement.

"Some American cars are already built? Well, that is a pity, but there cannot be many of them, and I know that Mr. Vanderbilt and Mr. Thompson are such thorough sportsmen that they will not allow a mistake or a misunderstanding to allow two or three firms such an advantage over the entire world. Of course, if Mr. Vanderbilt wants his race to be for American cars only, let him stick to the proposed rules, and I am certain his wish will be gratified. But, quite apart from obligations, if you want to make the American event a success, you will certainly have to adopt the rules of the Ostend conference. Our Sarthe cars are gone, who knows where, and we do not want to build any more of that type."

W. S. Hogan, one of the delegates of the Automobile Club of America, seen at his office in the Avenue Kleber, at once confirmed the statements of M. René de Knyff regarding the obligation of America to submit to the international rule. "Personally I was not present at the Ostend international conference, and was not even notified to attend. If the A. C. A. did send a notice, it certainly did not reach me. To the best of my knowledge my colleague, Howard Johnston, was not present, either. When I heard that such important business had been enacted I was sorry I had not received a copy of the program, for in that case I should have attended, whether convoked or not.

"At the international conference held

in Paris, November 21 of last year, both Howard Johnston and I were present. Our instructions from the A. C. A. were to act as we thought best, and we consequently voted the ratification of the Ostend rules. The conference was attended by every recognized national club, and the vote was unanimous. In my opinion the only sensible policy was to adopt the uniform rule; times are now too strenuous in all countries for money to be squandered on the construction of half a dozen sets of racers each year. Builders in every country in Europe want a rule which will allow them to build one set of cars per annum and to race them in every country holding a long-distance speed test.

"The conclusion of the matter is that the American club, having given us the power to act, is under an obligation to abide by the contract, and though I know that differences have arisen between the A. C. A. and the A. A. A., that should not prevent the Ostend rule being adopted for the Vanderbilt cup race."

DENVER TEST DATE IS SET

Denver, Col., May 2—Motorists in Denver and the Rocky Mountain region are becoming interested in a free-for-all endurance contest for stripped stock cars that is scheduled to take place here on Memorial day. G. A. Blanchard, in the Colburn building, is the promoter and manager. The course selected is in the shape of an elongated triangle, the sides covering 27½ miles and the cross line 4½ miles, making a total of 32 miles, over which the cars must run ten times, and the winner will be rewarded with a handsome silver cup and one-half of the total amount of entrance fees received. The entrance fee is \$100. The course lies about 6 miles northeast of the Denver county courthouse, and is in the county of Adams. Entries close on May 16, and so far five entries have been made.

MEDALS INSTEAD OF RUN-OVER

Norristown, Pa., May 2—At a meeting here last night to discuss means for settling the many-sided tie which resulted from last Tuesday's endurance run of the Norristown Automobile Club it was decided, after a long and argumentative session to let the matter stand as it is, and give each of the clean-score entrants and drivers a silver medal, struck from the metal in the original cup, which is to be melted down for the purpose. The contest committee was compelled to throw out one of the clean-scorers—the Packard driven by Van Peacock. That was the car that struck F. M. Jaquith, who was fixing a tire on his Crawford, and who stopped his engine and rushed back to see if he could render any assistance. The committee members were all aware of the stop and were disposed to allow Peacock's claim for a clean score on the ground that his action was prompted solely by humane considerations; but later J. R. Coulston,

No. 12, filed a protest in regular shape against the award, and the committee was compelled to interpret the rules literally, Peacock being penalized a total of 11 points—10 for stopping his motor and 1 for the fraction of a minute the engine remained motionless. H. S. Stillwagon, who entered car 31, a big Pennsylvania 50, missed a clean score through pure carelessness. Losing 11 minutes through tire troubles, Harry Croninger, who was driving, easily made up the lost time, and checked out of the Coatesville control on his original schedule time, whereas the 11 minutes he lost should have been added to the running schedule and would have been allowed for by the committee. Another car which suffered through neglect of someone to read the rules carefully was P. V. Hoy's 45-horsepower Pierce Great Arrow. The observer is blamed.

WILKES-BARRE ISSUES PROGRAM

Wilkes-Barre, Pa., May 2—The third annual hill-climb of the Wilkes-Barre Automobile Club on Decoration day will be the most extensive and interesting of any yet held by the club or any other. The Wilkes-Barre mountain, familiarly known as Giant Despair, will have its road specially treated and oiled. The course is 6,000 feet in length and the summit is 700 feet above the starting point. It has one right-angled turn and two S turns. It will be policed by the C. T. A. U. regiment, an independent military body, which has volunteered for the occasion. President George F. Lee, of the Wilkes-Barre Automobile Club, announced that there will be eleven events in this year's program, including a free-for-all to which racing cars of any horse and motive power will be eligible and a special class, known as the Briar-cliff class, open to stripped stock chassis of a piston area practically the same as was the area limit in the recent Westchester county road race. For this latter event a special trophy valued at \$500 will be offered, which is to be a yearly challenge trophy to become the property of the manufacturer whose cars win it three times. For other leading events there will be three trophies valued at \$125 each.

RACERS REACH JAPAN

Chicago, May 4—The de Dion and Züst are in Japan, according to cable advices, which state the two cars reached Tsurugua last Thursday. From the other direction, from Paris, comes the statement that the de Dion will be pulled out of the race upon its reaching Vladivostok, although no reason for this action is given. It is reported also that the Protos may be allowed to figure as a contestant, it being said that Koeppen shipped from Ogden, Utah, because of a misunderstanding of the rules, he believing it was permissible to ship after having completed the most difficult part of the transcontinental journey. It is probable some allowance will be made the Thomas for going as far as Alaska.

NINETEEN TIE IN TEST

Baltimore's Sealed Bonnet Run Results in Good Showing by Majority of Contestants

Baltimore, Md., May 2—Nineteen of the thirty-four cars entered in the first sealed bonnet contest ever held in Maryland finished today with perfect scores. The committee decided that it would be drawing lines too fine to pick out three cars from the nineteen that made the perfect performances, so called it a tie.

Seven other cars finished within the time limit of 12 hours, but they were disqualified because of broken seals, cranks, rods, springs, etc. The others did not make their appearance within the required time.

The run was made by the successful cars in exceedingly fast time, considering the difficulties. In the first place the route was over the roughest roads in the state and through the mountains. To make matters worse the contestants encountered a fierce wind and rain storm on the return trip. The roads were drenched and became so slippery that most of the cars skidded more or less, with the result that there were many narrow escapes from accidents. At one time the clouds became so dense and the rain poured in such torrents that the drivers could hardly see.

The time was rather slow on the up trip because of the steep climbs up the mountain sides, but the return half from Hagerstown to Baltimore developed into a regular road race, although speed did not figure in the contest. The only casualties along the line was the running down of a pig, a dog, a turtle, snake and three chickens by one of the cars that finished with a perfect score. There was a slight collision between cars 3 and 16, Maryland

and Thomas cars, respectively, at Flint Station, along the Western Maryland railroad, where one of them had made a wrong turn and was backing. Car number 26, a Corbin, blew out a cylinder 6 miles this side of Westminster on the up trip and had to be assisted by another car. Car number 34, a Cadillac, had a little engine trouble, but this was not serious, however, as the car was one of those that finished with a perfect score. A number had tire trouble, number 31, a Packard, having to make seven changes. A narrow escape from collision occurred between cars 7 and 11, an Oldsmobile and Thomas, respectively, in consequence of tire trouble. Howard W. Gill, driver of No. 11, was compelled to stop on the mountains while pulling a steep hill, when No. 7, driven by A. L. McCormick, began to descend backwards. A little clever manipulation, however, prevented a bump.

The start was made from in front of the headquarters of the Automobile Club of Maryland, Mount Royal avenue and Charles street. The original plan was that the first car should leave promptly at 6 a. m., and those in the test in order to have a perfect score should complete the trip within 12 hours. The first car, however, was not started until half-past 6 o'clock. The others followed at intervals of 1 minute. The route was from this city to Hagerstown and return, a distance of 147.8 miles. On the up trip the cars went by way of Westminster, to Taneytown, to Emmittsburg, to Lanz, to Foxville, to Cavetown, to Hagerstown. Returning the route was via Middletown, to Frederick, to New Market, to Ridgeville, to Ellicott City, to Baltimore and thence to the starting point in front of the clubhouse of the Automobile Club of Maryland. While the club would have liked to have seen a winner, yet everyone is content that so many got through with perfect scores.

SUMMARY OF BALTIMORE'S RECENT SEALED BONNET TEST

Name of car	H. P.	Entrant	Driver	Notes
2—Locomobile	40	J. H. Friedenwald	Callahan	Broken seal
3—Maryland	26	Sinclair, Scott Co.	W. H. Rife	Broken seal
4—Maryland	26	Sinclair, Scott Co.	J. M. Rife	Perfect
5—Franklin	20	A. S. Dowler	A. S. Dowler	Did not finish
6—Ford	15	Ford Auto Co.	R. F. Kaehler	Perfect
7—Oldsmobile	35	A. L. McCormick	A. L. McCormick	Perfect
8—Kisselkar	40	J. L. B. Wilhide	J. L. B. Wilhide	Did not finish
9—Autocar	12	Mt. Vernon Auto Co.	B. F. Gooden	Perfect
10—Peerless	30	Motor Car Co.	W. S. Smith	Broken rod
11—Thomas	40	Motor Car Co.	H. W. Gill	Perfect
12—White	20	G. L. Evans	S. W. Morrow, Jr.	Broken sp'gs
14—Winton	48	Winton Motor Car Co.	T. C. Goodwin	Perfect
15—Packard	30	D. W. Wilson	H. Hardesty	Perfect
16—Thomas	60	Mrs. A. E. Thorne	E. F. Coley	Perfect
17—Welch	50	M. A. Rice	M. Kelly	Perfect
18—Pennsylvania	50	J. A. Rice	S. Norwood	Did not finish
19—Pullman	20	Thomas & Tollman	G. R. Tollman	Did not finish
20—Pierce-Arrow	40	Southern Auto Co.	D. A. Clark	Perfect
21—Winton	48	William Heyser	W. Heyser	Did not finish
22—Chalfont	30	F. W. Sandruck	F. W. Sandruck, Jr.	Broken seal
23—Rambler	82	T. B. Jeffery & Co., Philadelphia	Wall	Broken seal
24—White	30	White Garage Co.	Lee Tremblay	Perfect
25—Packard	30	William Keyser	William Keyser	Perfect
26—Corbin	30	Royal Garage		Blew out cyl.
27—Royal Tourist	45	Royal Garage	P. R. Reese, Jr.	Perfect
28—L. C. Maxwell	14	Lambert Auto Co.	W. E. Lambert	Did not finish
29—Thomas	60	Motor Car Co., Washington	Wallace A. Hood	Perfect
30—Peerless	30	G. Thomas	L. Pope	Did not finish
31—Packard	30	Mar-Del Mobile Co.	W. E. Baker	Perfect
32—Franklin	28	Mar-Del Mobile Co.	M. Graham Hall	Perfect
33—Buick	22	Mar-Del Mobile Co.	Jack White	Perfect
34—Cadillac	20	Mar-Del Mobile Co.	L. M. Foster	Perfect
35—Locomobile	40	Callahan, Atkinson Co.	H. Flonda	Perfect

*Under protest



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SAVANNAH SEEMS LOGICAL CHOICE



WHEN the residents of any community give up their roads for the purposes of motor contests, it follows as a natural sequence that there must unavoidably be more or less interference with those citizens who are accustomed to use the highways in the pursuit either of business or for the purposes of pleasure.

Therefore, it appears to be a logical conclusion that it is most unwise to place the venue of a big motor road contest in the county of any state wherein practical unanimity does not exist as to the use of the roads for high speed motoring. One never knows what may come up to interfere with present arrangements, and the recent Briarcliff event with its eleventh hour difficulties supplies an example that does not need any amplifying.

New York city is the metropolis of the country, and it has a natural advantage in all things, including the supplying of thousands of onlookers to any event which may be scheduled to take place in its vicinity. But it is the presence of these thousands of onlookers which compels in the case of a motor road contest a most thorough guarding of the course, and this only can be accomplished by the presence of uniformed men and possessing authority to forbid for the moment all citizens, other than those directly engaged, any access to the road.

If it were possible to complete the Long Island motor parkway in time for the race, then the selection of New York city would be a foregone conclusion. But one thing and another has delayed work on the parkway, uniformed men seem an utter impossibility, and gradually hopes are fading away for a 1908 Vanderbilt race in the metropolitan district.

In looking elsewhere for a course, the Vanderbilt cup commission is naturally seeking a locality where the residents are entirely favorable and where proper policing of the course is assured. It is an easy matter to pick out roads, and various states can supply excellent stretches of highway. But it is another thing to have a unanimous invitation and the certainty of the essential policing. Savannah up to date has given the most substantial guarantees of the several bidders; in fact, is the only applicant that has come forward prepared and ready to do business without equivocation. Connecticut has been mentioned frequently of late as a possible

scene for the big international road race. Now it appears that the motorists of that state are not all of the same mind and the existing law is quoted as absolutely forbidding such a contest. Connecticut is favored with a most excellent law, liberal in its provisions, but prohibitive in reference to road racing. One can hardly blame its motorists for running the risk of a revision of the present law, even for such an event as the Vanderbilt cup race.

EXPORT TRADE SHOULD BE STUDIED

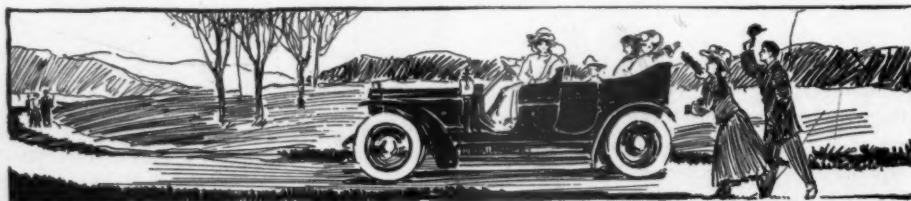


MOST American motor car manufacturers are commencing to understand the necessity of an export trade in their own respective businesses; some are beginning to reach out to secure it; many are expending large sums of money in experiments upon it, and all are regarding the subject with increasing practical interest. Yet men who know the manufacture of their product to its utmost details, and who know its sale in the United States most thoroughly, hesitate and ponder upon its sale outside of the United States. There is, however, no difference between selling cars in Rio de Janeiro, Melbourne, or any other foreign city and in selling them in many remote portions of the United States. Selling cars abroad may involve higher freight rates, though this is not generally the case; it may involve a different language, a customs tariff; it often involves different business customs, different credits and banking, better packing, and other details, but this is as true of portions of the home market.

Details which seem to worry many manufacturers the most are relatively of the least importance. What is most to be considered is that while cars thus introduced in foreign markets are merely sold a little farther away from home they are sold in competition with cars from other countries. American manufacturers must, therefore, of necessity show as much or more industry in getting trade abroad as they do in getting trade in the United States. They will have to use every

method, every resource abroad that they do in the United States, possibly more, in order to get this business. If their trade in the United States requires traveling men it is safe to say that their trade abroad will require the same aids. If they can expect to secure no trade in the United States by sending out catalogs in French or Spanish they can certainly expect no trade in a French or Spanish-speaking country by sending out catalogs in English. In short, the foreign field should be regarded as is the domestic field; it should be looked after as closely as home markets, and should be made the basis of permanent trade as the home market is.

The essentials of successful foreign trade are not different from the essentials of success in the home trade. Cars to be sold must be suitable to the market in which they are offered. They must be sold by representatives as well equipped and as energetic as the representatives of competitors. In fact, one must go after trade and get it, as a salesman is expected to get it in the United States. The mere fact that cars are sold in another country, that they are shipped by sea rather than by rail, that they pass a customs tariff, are merely elements in the problem of selling goods—elements infinitely less important than other considerations which manufacturers are accustomed to meet daily in extending their business in the home market. The manufacturer who carefully studies all these conditions and endeavors to meet them will be the man to get the cream of the trade when it is developed.





J. H. TYSON, owner of the Isotta that won the big race at Savannah, Ga., is about to receive the laurel wreath emblematic of his victory, only in this case it comes in the form of a magnificent trophy which has just arrived from the designers. It stands 27 inches high on a 9-inch ebony pedestal, around the base of which are the silver bales of cotton for inscription of winner's name, car, time, etc. It holds 8 gallons, and the figure of ex-Governor Oglethorpe, the palmetto, Spanish moss and cotton stand out in bold relief. Mr. Tyson no doubt will value the trophy more for what it represents rather than for the amount of money it cost. As the years roll by this trophy will become more and more valuable, for it is emblematic of the first stock chassis race ever run in this country and symbolizes the advent of an American star driver—Louis Strang. It is to be hoped Savannah has marked the starting of a career for Strang that will rival in brilliancy that of the mighty Thery, of France, or the dashing Nazzaro, of Italy.

A N ANTI-SCORCHING campaign is being waged in many cities, and in Chicago in particular the motorphobes are having a merry time. The chief of police is mapping out a vigorous attack, the daily press is making capital out of the outburst and the poor motorists are made to feel like malefactors. But after this brain-storm has died away it will be discovered it was something like a tempest in a teapot, for in Chicago the motorists use the city streets only when they have to, which is about 10 per cent of the time. The other 90 per cent they drive over the magnificent boulevards, over which the chief of police has no control. The park commissioners, the ones who ought to be making the outcry if there was any occa-

sion for it, are saying nothing, which would lead one to believe they were satisfied with the way the motorists are behaving themselves. All they want is authority to collect the fines imposed. After studying these conditions, it should



THE SAVANNAH CUP

strike the observer that this scorching by Chicagoans is confined to a very few and that some of the energy of the city authorities might well be devoted to fixing up the streets under their control rather than trying to do the work of the park people who seem very well satisfied.

I T CAN safely be said the competition season is upon us in earnest, for in the last week three big contests have been held—a 3-day affair in Detroit, which evolved thirteen perfect scores; a sealed bonnet test in Baltimore which stamped nineteen O. K., and the 2-day trip of the Motor Club of Harrisburg, which returned definite winners. Looking the situation over, one cannot help but admire the tactics of the Pennsylvanians, who realize the general public knows a motor car can go through the usual stunts arranged by most of the clubs and therefore have devised means whereby definite winners were determined. Your public nowadays looks beneath the surface and it is interested in the condition of the cars after these tests, something which few promoting organizations undertake to discover. It is ready to make excuses for minor defects and so those cars with slight penalties do not suffer by comparison. Therefore, such affairs as that at Harrisburg ought to be regarded as of the greatest benefit to the motoring industry.

T HE Glidden pathfinders should do a lot of figuring and think more times than twice before sidestepping Philadelphia, one of the greatest motoring centers in the country, and the home of one of the largest and most loyal A. A. A. clubs. R. H. Johnston recently laid out a 2 days' run of 225 miles between Philadelphia and New York, which took in the Delaware Water Gap and dodged New Jersey utterly. Following this route there would be a 90-mile run to the Gap, where three big hotels would afford accommodation over night. This would leave for the morrow a 135-mile run to New York by way of Port Jervis and the felly to Tarrytown at Nyack. This should be remembered.

SCHEDULE OF MOTORING EVENTS THAT WILL BE CONTESTED THIS YEAR

Targa Florio—Third annual Sicilian road race, May 10.

Irish Reliability—Annual Irish reliability trials, May 11-16.

Endurance Run at Hartford—Automobile Club of Hartford's endurance run, Hartford, Conn., May 15.

Chicago Hill-Climb—Chicago Motor Club's third annual hill-climb, May 15.

Indianapolis Endurance Run—Sealed bonnet test at Indianapolis, May 20.

Bridgeport Climb—Annual hill-climb at Bridgeport, Conn., May 30.

Twelve-Hour Endurance—New Jersey Automobile and Motor Club's 12-hour endurance run, probably May 30.

International Reliability—Royal Automobile Club of Great Britain's 2,000-mile international reliability test, June 1-18.

Dead Horse Climb—Annual Dead Horse hill-climb at Worcester, Mass., June 6.

Prince Henry Tour—First annual Prince Henry tour in Germany, June 9-17.

Cleveland Hill-Climb—Annual Cleveland hill-climb, June 13.

Chicago Reliability Contest—Twelve hundred mile 4-day contest Chicago Motor Club, June 24, 25, 26, 27.

Glidden Tour—Start of annual A. A. A. tour from Buffalo Wednesday, July 9; good roads convention preceding it July 6, 7 and 8.

Grand Prix—Third annual French grand prix, July 7 and 8.

Chicago Economy Test—Third annual economy test of Chicago Motor Club, August 14.

EXPORTS AND IMPORTS

Government Returns for Month of March are Announced— Reports from Continent

Washington, D. C., May 2—The latest compilations of the bureau of statistics show that during March 217 cars, valued at \$466,447, and parts to the value of \$72,941 were exported from the United States, as against 307 cars, valued at \$493,425, and parts valued at \$51,922, exported during the corresponding month of last year. During the 9 months ended March, 1908, the number of cars exported was 1,735, valued at \$3,159,147, while the value of the parts exported was \$442,064. The number of cars exported during the corresponding period of 1907 was 1,889, valued at \$2,965,284, while the value of the parts exported was \$453,309. Cars and parts were shipped to the following countries in March last: United Kingdom, \$156,820; France, \$81,083; Germany, \$10,347; Italy, \$45,842; other European countries, \$4,688; British North America, \$135,948; Mexico, \$39,430; West Indies and Bermuda, \$33,617; South America, \$4,293; British East Indies, \$391; British Australasia, \$2,172; other Asia and Oceania, \$11,151; Africa, \$525; other countries, \$13,081. The import tables show quite a falling off in the imports of foreign cars. During March, 1907, the number imported was 88, valued at \$289,443, while in March last the number was only 35, and the value \$79,497. During the 9 months' period there was a corresponding decline in these imports, the returns showing that the number of cars imported was 919, valued at \$3,228,336, in 1907, declining to 844 cars, valued at \$2,027,825, in 1908. The imports of parts likewise fell from \$55,230 in March, 1907, to \$39,946 in March last, and from \$574,509 to \$348,098 during the 9 months' period. During March last cars were imported from the following countries: United Kingdom, 4, valued at \$9,732; France, 17, valued at \$39,734; Italy, 13, valued at \$28,101; other countries, 1.

Government statistics of France, Germany and Great Britain show there were respectively 34,850, 36,022 and 79,513 motor cars in these three countries at the end of 1907. In France the figures given for Great Britain have surprised the trade. Some claim there must have been an error, possibly that the real total had been doubled just for a joke, possibly also that motor cycles had been included in the tally. At any rate many Frenchmen doubt if anything like 79,513 motor cars are running in Great Britain, including even all the colonies. It has been suggested to the Automobile Club of France that efforts be made to find out whether these figures apply to the whole of the British empire and to get the figures for the United Kingdom, as well as for Ireland, Scotland and England separately. All of which shows

that the Frenchmen are beginning to worry about their still existing "supremacy." Concerning the British figures, it has been stated that this number of cars is actually to be found in England, Ireland and Scotland and does not include motor cycles. Furthermore, there are included some 12,000 cars "made in France." But if the British figures create a surprise it certainly ought to be still more surprising to Frenchmen to find there are more cars on the roads of Germany than on those of France, because only a few years ago—2 or 3 at the most—there were not half as many cars in Germany as in France. But in the German empire, like in King Edward's land, the manufacturers of big cars have found out long before the French makers that there would be some time a big demand for cars of a moderate price, and they started to build some. Then there were other concerns started which have been making nothing but small rigs and touring cars "for the average purse." It cannot be denied by anyone who has watched the motor traffic in Paris—touring cars or rather pleasure vehicles—that the number of small cars—what is called in the United States runabouts—is exceedingly small—in the remainder of France that proportion in comparison is just as little, it is declared.

ASK SECURITY FOR COSTS

New York, May 5—An interesting development in the so-called Selden patent litigation, consisting of the various actions of the Electric Vehicle Co., of Hartford, Conn., now in the hands of receivers, against the Ford Motor Co. and others, which is pending in the United States circuit court for the southern district of New York, is brought to light in a motion which will be made by R. A. Parker, of counsel to the Ford interests, through the New York attorneys, Cardozo & Nathan, to have the complainants deposit security for costs, and that the proceedings may be stayed, pending such deposit. This motion is set for hearing, Friday, May 8, and is based upon an annexed affidavit by Mr. Parker, in addition to the bill and proceedings already filed in the cause. In his affidavit Mr. Parker sets forth that George B. Selden is not alone a non-resident of the district in question, but that he has no title or interest in the patent being litigated; further that the Electric Vehicle Co. is also a non-resident and that it has been insolvent since December 7, 1907, and that the Association of Licensed Automobile Manufacturers, which is bound to carry on the patent litigation in question at its own expense, "appears to be on the verge of dissolution, that its revenues are very much impaired, and that as a source from which costs may be paid it has become wholly unreliable." An order is accordingly prayed for that the said complainants be compelled to deposit security for costs in the action, failing which the bill should be dismissed.

BIG GOOD ROADS RALLY

A. A. A. Making Preparations for Booming National Convention at Buffalo in July

New York, May 5—Special telegram—The twenty-fourth state association was admitted to the American Automobile Association at the meeting of the national organization's executive committee yesterday. This body was the Virginia State Automobile Association. By the admission of the Automobile Club of Little Rock, a start was made for a state organization in Arkansas. Reports from various state bodies told of added clubs, especially in the middle west.

It was decided that instead of designating a single day as orphans' day throughout the country, that the A. A. A. would suggest the second week in June as the best period in which the various clubs may conduct their annual outings.

Every club in the association will be asked to send three delegates to the good roads and good laws convention, to be held at Buffalo, July 6, 7 and 8, preceding the start of the annual tour for the Glidden and Hower trophies. Because of this event, the June meeting of the executive committee will take place at Buffalo on Tuesday, June 2.

Preceding the session, there was a meeting of the special committee in charge of the Buffalo convention, which promises to be the most important affair of the kind ever held in this country. The governors of all the states throughout the country will be asked to send representatives and a large attendance is already assured.

In connection with the question of good roads, there will be seen roads in actual construction and also demonstrations of the various kinds of road preservatives, including oil, coal tar and other preparations. Practically all the important road machinery concerns of the country will have exhibitions, and the subject of good roads will be thoroughly covered. Interesting reports are expected from Massachusetts and Pennsylvania, especially the latter state, for the commissioners of Fairmount park, Philadelphia, lately have directed the sprinkling of all the principal roads in that famous pleasure ground with terracolio, a composition of asphaltum, oil and water. For many months a test of the virtues of the preparation had been quietly made on several of the principal driveways, with the result that Superintendent Jesse Vogdes became convinced it would preserve the roads for a long time and prevent the raising of clouds of dust by swift-moving vehicles. The sprinkling operation will be repeated every week or will be explained at Buffalo.

George C. Diehl, county engineer of Erie county, will be the chairman of this committee on practical road construction. Alfred Reeves will serve as chairman of

the committee on publicity, and others well qualified will assist Chairman R. P. Hooper, of the good roads board, and Chairman Charles Thaddeus Terry, of the legislative board. The National Grange has promised its hearty support, and the president of this big organization, ex-Governor N. J. Bachelder, of New Hampshire, will be one of the speakers. The delegates will be entertained in various ways, and work on the various activities is reported to be well in hand.

PATHFINDERS IN PITTSBURG

Pittsburg, Pa., May 4—Secretary Dai H. Lewis, of the A. A. A. touring board, and his associate pathfinders have completed their task of laying out the route of the annual reliability test from Buffalo as far as this city. They have tarried here several days wrestling with the problem of how to include Philadelphia in the route and at the same time cut out from the itinerary every foot of the unfriendly soil of New Jersey. The pathfinders have so far proved unequal to the solution of the problem, and have practically determined to give the City of Brotherly Love the go-by. Accordingly they propose to lay their course to Bedford Springs, via Export and Blairsville, which will cut out the run over the national turnpike by way of Greensburg, originally contemplated. From Bedford Springs they plan to go to Harrisburg and then cut across northeastern Pennsylvania to Albany, then down the east bank of Hudson river to New York city. From New York it is the intention to partially retrace their tracks and strike east into New England to Boston, whence they will reach the terminus of the run at Saratoga, touring a part of the White Mountain district en route. The work of marking out the route for the Glidden started Friday when the pathfinding Premier, a 50-horsepower six-cylinder amchine, left Buffalo carrying Secretary Dai H. Lewis, of the A. A. A. touring board; Leon M. Bradley, representing the American Motor Car Manufacturers' Association; Nathan Lazarnick, the photographer, and Ray McNamara, the last named the driver of the car.

SECOND CHICAGO SHOW POSSIBLE

Chicago, May 4—The board of managers of the Chicago Automobile Club meets Thursday to consider a letter from Alfred Reeves, general manager of the American Motor Car Manufacturers' Association, in which the writer intimates that the independents would not be at all averse to joining forces with the local club and promoting a second big show in Chicago next winter. Reeves asks the club what it could furnish in the building line and adds that there is little likelihood of the traveling show being run in the fall because of a lack of time. The automobile club has in mind suggesting the Dexter park pavilion at the stockyards.

KANSANS MAP A ROUTE

Laying Out Reliability Circuit Shows Friendliness of Farmers Towards Motorists

Kansas City, Mo., May 4—Larger than any contest or tour ever before attempted by the Kansas City Automobile Club will be the endurance run May 16, the distance to be covered being 145 miles. The run is to be from Kansas City to Ottawa, Kan., and return, although not over the same route. For those who do not care to go so far, there will be a run from Kansas City to Lawrence, Kan., and return, 88 miles. Both divisions will be started from the same point and at the same time and should travel well together until Lawrence, 44 miles from Kansas City, is reached. It is proposed to have this same division start on the return from Lawrence at such an hour that they will enter Kansas City at the same time as will the cars which go the longer distance.

The entire route to Ottawa and return was laid out last week by a party composed of the following: W. G. Coumbe, chairman of the runs and tours committee; W. G. Whitcomb, perpetual holder of the right to drive the confetti car; Don Cole and Carl J. Simons, manager of the Palace Auto Co., in whose 36-horsepower Oldsmobile the trip was made with a perfect score. It was expected by this committee and the Motor Age man that the roads would be far from perfect, inasmuch as all of the route, with the exception of 22 miles in the case of the Ottawa division and 18 miles for the Lawrence contingent, is dirt roads. To the surprise of everybody, it was found that the Kansas road overseers had learned the use of the road drag to good purpose. Mile after mile of dragged road was encountered, on which the going was better than on any except the best macadam roads. Several spots which were not in such good condition were in the hands of roadmakers and should be fine before the date of the run.

Almost throughout its length, the run will be upon historic ground. Much of the route lies along what was the old Santa Fe trail, running in the cross state freighting days to Santa Fe, N. M. By legislative act, Kansas has marked this old trail with boulders of red granite, suitably inscribed. Most of them are placed at cross roads and are almost as good as signposts for the motorist who relies on landmarks.

Shawnee and Lawrence were both burned and sacked during the civil war by guerrillas who engaged in the border warfare that raged between Missouri and Kansas before the abolition of slavery. At Lawrence is the University of Kansas and the Haskell Institute for Indians. The tour will be in full view of the latter institution for several miles.

As the run is almost entirely in Kansas, it is interesting to note the attitude of the

farmers of that state towards motorists. The remarkable truth must be told that the Kansans are glad to see the motor cars come. And it is also worthy of note that in the past year many Kansas horses have been broken to the sight of motors. Frightened animals were very few during the trip last week. The farmers have learned to signal, and if they have the least doubt about their horse they take this precaution.

MICHELIN UTTERS A PROTEST

New York, May 5—Edouard Michelin, of Michelin & Co., the big French tire-making firm, has resigned the presidency of the Automobile Club d'Auvergne, as a protest against the club's alliance with the Association Generale Automobile, with a view to securing for its members tires at cut prices. In view of a threatened similar movement in this country headed by a club, which has loudly protested its policy of fostering the industry, M. Michelin's letter is interesting and very much to the point. It follows: "The affiliation of the Automobile Club d'Auvergne with the Association Generale Automobile, which offers as a special inducement to its members the fact that they will get a rebate on all motor supplies and in particular tires is of a nature to cause great prejudice to motor car agents. I consider this an unfair proceeding against the agents, who are the indispensable contributors to motoring. It would, indeed, if the public's common sense and justice did not prevail, rob these commercial men of a profit to which they are legitimately entitled, and which is not exaggerated. I, therefore, do not wish to form part of it, not even indirectly. I do not know what other rubber firms of Clermont-Farrand intend doing, but as far as I am concerned, I beg to confirm my resignation, which Mr. Borel handed you on my behalf, when you voted for this new arrangement. I deeply regret to leave the Automobile Club d'Auvergne, and I can only leave in order not to follow the new track in which it moves."

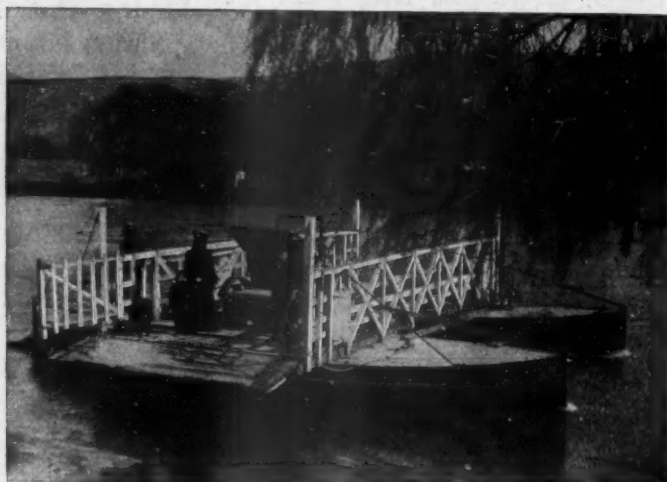
MORA SIX IN ROAD TEST

New York, May 4—To settle an argument which took place at the conclusion of a run by members of Cleveland Automobile Club as to the superiority of six-cylinder cars for touring. F. H. Adams, manager of the Wentworth Motor Car Co., drove his Mora six tourer from Cleveland to the Mora factory at Newark, N. Y., a distance of 300 miles, inside of 12 hours' running time. Leaving Cleveland at 6 a. m. on Tuesday, April 26, Adams, accompanied by his wife and nephew, drove to Erie, 102 miles, in 2 hours 30 minutes. Buffalo was reached at 1 o'clock. Rochester, 79 miles, was made in 2 hours flat. Newark, 33 miles, the end of the run was reached at 6:30, central time, an elapsed time of 12½ hours, or less than 10 hours actual running time.

HAZARDS OF MOTORING IN NEW ZEALAND



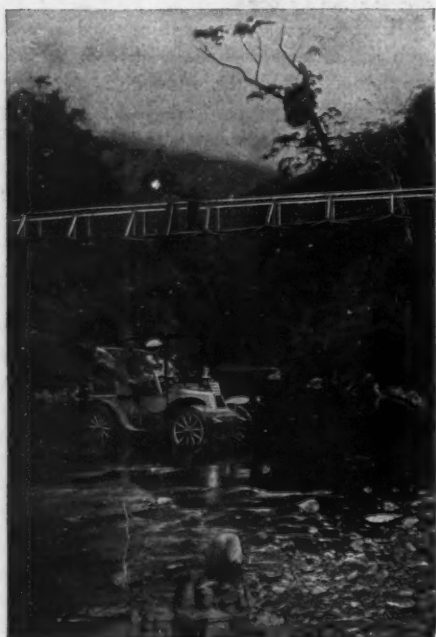
SUSPENSION BRIDGE BETWEEN CROMWELL AND BANNOCKBURN



MOTOR FERRY ACROSS MOLYNEAUX RIVER, NEAR CROMWELL

AUCKLAND, N. Z., April 8—Take an ordinary map of the world, loop up New Zealand in the South Pacific ocean, and its size will appear dwarfed by the immensity of the surrounding waters. Yet this progressive land is very nearly the size of Italy, and not unlike it in form, with the north and south positions re-

the colony are available to the hum of the motor. Mount Cook, which stretches its snow-capped peak 12,349 feet above the sea, crowns the range known as the Southern Alps. Great glaciers extend their icy arms to within a few hundred feet of the sea on the western coast, but the eastern slope is more gradual, and it is here that



CATLIUS RIVER, SOUTHLAND



LIGHTHOUSE ROCK, ON SKIPPER'S ROAD



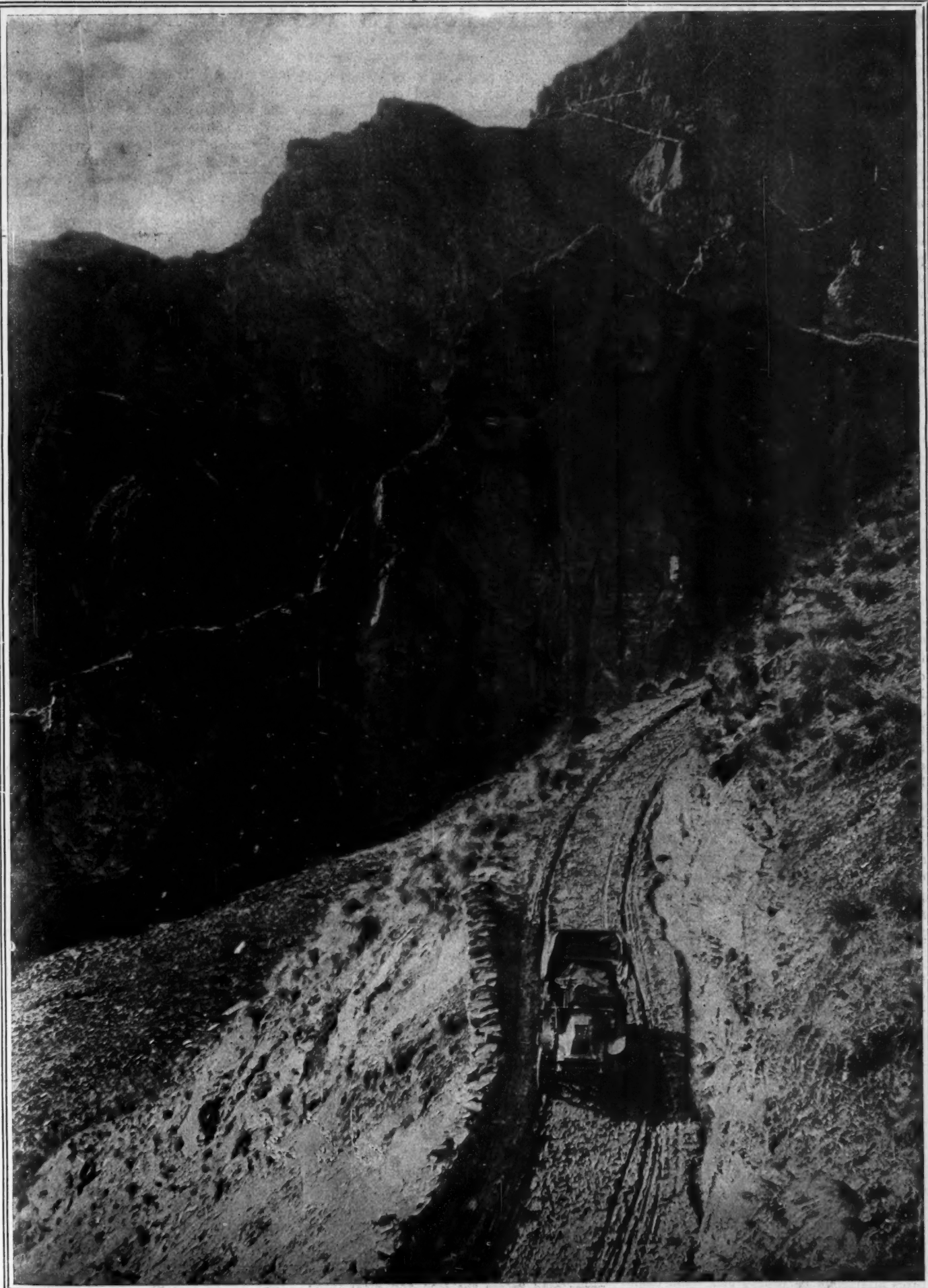
ROAD EMBANKMENT AT LAKE WAKATIPU



RACE WITH TWO-ENGINE EXPRESS

versed. Two large islands, separated by Cook strait, 16 miles in width at its narrowest point, and a number of small islands, comprise the colony. North island has an area of 44,468 square miles, and South island is 54,525 square miles in extent. It is along the southeast region of South island, on the eastern slope of the Southern Alps, that the beautiful scenery predominates which is shown in the photographs. With the march of civilization, the motor car now safely rolls along the picturesque routes once peopled by the wild and savage Maoris, and all parts of

generous nature has softened the rugged grandeur with a charm to be found nowhere else south of the equator, and produced a garden spot famous for its wealth of agricultural products and wool growing. Mineral wealth also abounds. The roads are as a general rule of the pioneer type, but a motor car has little difficulty in traversing them, and extensive improvements are being made in the more thickly populated districts. The hardest parts of the South Island to travel are the heavy sand drifts between Cromwell and Lowburn Point.



HIGHWAY CUT THROUGH MOUNTAINS TO GOLD REEFS—ALONG SKIPPER'S ROAD IN NEW ZEALAND

CASEHARDENING OF PARTS FOR MOTOR CARS

THE process known as casehardening is one which consists of adding such a percentage of carbon to a relatively thin outside layer of iron or mild steel as will, on correct quenching, produce a hardened surface, while the inner core of the metal still retains its initial character. Casehardening is conducted in practically all motor works; but, generally speaking, it appears that comparatively little is known of the theory of the process by those who practice the operation, and up to quite recent years crude rule of thumb methods were almost universally applied. Among the many mechanical parts produced in the motor car industry that require casehardening are piston pins, chains, sprockets, roller and ball bearings, parts of camshafts, steering gear pins, gear wheels in gear box and differential.

Figure 1 represents a typical casehardened article—a piston pin for a 28-horsepower car. The striated lines of fracture are evidence of good and accurate work, for if the pin had been incorrectly hardened it would have broken straight across without showing the series of rings to be seen in the photograph. The hardened portion can be observed to the right of the crack as a semi-circular white band, the thickness of which is about 1/32 inch.

Casehardening is fundamentally the same as the older process of cementation, the chief point of difference being that in casehardening a different carbon-conveying material is used from that generally employed in cementation, while in the latter process the carbon is allowed to penetrate through, or nearly through, the bars, and is not interrupted so as to form merely a surface or case of carburized metal.

Casehardening is somewhat allied to the Harveyizing and Krupp processes, both of which are employed for the hardening of armor plate. In the former process a solid carbonaceous cementing material is employed—usually charcoal; in the latter, a gaseous hydrocarbon replaces the charcoal.

Materials Used in Casehardening

1—Steel—For the purpose of the research, of which the present paper is an epitome, a variety of steel was selected which has been found by experience in the trade to be especially suitable for casehardening. On analysis, this steel was found to have the following composition:

	Per cent
Combined carbon	0.14
Silicon	0.01
Sulphur	0.08
Phosphorus	0.03
Manganese	0.58
Iron—by difference	99.16
	100.00

Casehardening Mixtures

2—Of these many were tried, among which were included such materials as burnt leather—several varieties—wood charcoal, anthracite, sugar charcoal, mixtures of barium carbonate and wood charcoal.

Owing to its almost universal use in trade circles in England, burnt leather was employed as the standard casehardening mixture throughout the research. Experiments were made to show the relative fineness of the various burnt leather mixtures, for it appears that the fineness or otherwise of the burnt leather fragments considerably affects the working of the process, as also does the amount of moisture and ash in the mixture. On analysis, the standard mixture for the research was shown to be made up as follows:

	Per cent
Carbon	77.80
Nitrogen	3.20
Moisture	13.44
Ash	5.56
	100.00

The steel bars to be casehardened were packed with the mixture in wrought iron



A FRACTURED PISTON PIN

boxes, the lids of which were carefully luted down with clay before the boxes were placed in the gas heated furnaces.

Experiments showed that, whereas metal casehardened at 700° C. absorbed no carbon whatever—according to microscopic tests—a slight penetration, to the depth of 0.13 millimeter, was observed after similar treatment at 800° C., while at 900° C. the depth of carbon impregnation had increased to 1.58 millimeters.

The photomicrograph above, figure 2, shows the carbon penetration resulting from this last experiment, and is typical of casehardened work. The normal structure of the steel will be noticed towards the left of the photograph, while as the carbon area is reached it will be observed that the white ferrite, or uncarburized iron, gradually thins out, and eventually disappears. The photograph, as a whole, shows the effect of a normal though somewhat deep—about 1/16 inch—casehardening, the “case” containing approximately 0.89 per cent carbon. At 1000° C. the depth of penetration was found to be more than twice that obtained by casehardening at 900° C. for an equal length of time.

At temperatures higher than 900° C. the danger of overheating the metal was evidenced, the carbon absorption becoming both “harsh” and irregular. By “harsh” we mean that there was approximately a sharp line between the hardened and the unhardened portions of the steel, and such a structure, induced as it is by too rapid absorption, is very bad when the steel is intended to be subjected to any deformation tendencies.

One of the most instructive series of results obtained from these investigations

EDITOR'S NOTE—This is abstract of paper read before the Iron and Steel Institute at Vienna by G. Law-Scott, M. SC.

into the subject of casehardening was that summarized in the following table, from which it will be seen that the effects of the use of different mixtures for varying periods of time—always at a constant temperature of 900° C.—were very diverse. Using specimens 76 mm. long and 6.5 mm. square section, the following figures were obtained:

Time of heating	Burnt leather	Wood charcoal	Barium carbonate and wood charcoal
2 hours.....	1.15 mm.	0.72 mm.	1.36 mm.
4 hours.....	1.58 mm.	1.07 mm.	2.20 mm.
8 hours.....	2.30 mm.	1.58 mm.	2.84 mm.
12 hours.....	2.80 mm.	1.80 mm.	3.17 mm.
16 hours.....	Right across specimen		

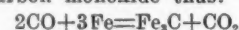
From the above it will be observed that the most rapid penetration took place when using the mixture consisting of barium carbonate and wood charcoal. However, when the heat was sufficiently prolonged, the several mixtures gave approximately the same results.

Casehardening materials

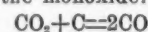
These, as previously stated, are very varied in character, and include such substances as wood charcoal, potassium ferrocyanide, potassium cyanide, petroleum gas, bone, horn, graphite, burnt leather, bone black, acetylene, barium carbonate and charcoal, coal gas, sugar charcoal, etc.

What is most noteworthy in connection with this list is that of all the materials mentioned those that give the most rapid casehardening effect are those which contain nitrogen in some form or other, or else have the power of utilizing atmospheric nitrogen.

In the case of a non-nitrogenous material, such as sugar charcoal or anthracite, it is usually assumed that the casehardening action comes about in the following way. Air in the cementing box unites with the carbon, forming carbon monoxide. This gas reacts upon the iron forming the hardening carbide of iron and liberating carbon monoxide thus:

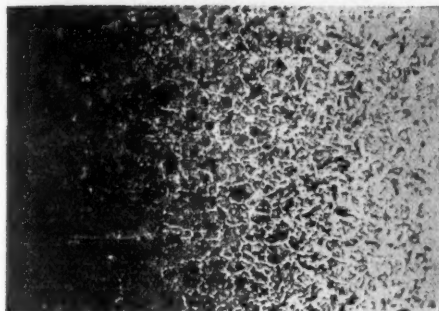


The liberated carbon monoxide acts upon a further portion of carbon, producing still more of the monoxide:



Thus the process is continuous and the carbon monoxide will continue to carry carbon into the metal until the latter becomes saturated.

As regards cyanides these are not much used for casehardening except for small work that requires merely a skin hardness, but a mixture that may depend upon cyanogen products for its effectiveness is Dr. Guillet's mixture. This consists of 60 per cent of wood charcoal and 40 per cent of barium carbonate, and its effectiveness has been clearly proved by the author, as shown in the preceding table. It is suggested that this increased casehardening effect is due to some property of the barium carbonate, which enables it to absorb nitrogen with the formation of an effective cyanide of barium.



EXAMPLE OF PENETRATION

All the casehardening materials in common commercial use contain nitrogen in some form or other. It is obvious that unless practical experience had shown that nitrogen aided the process in some way no one would think of using a costly nitrogenous material in place of charcoal on anthracite, these being well known but practically impossible substitutes which cost only as much per ton as burnt leather costs per hundredweight. To prove how slight was the effect—measured by carbon penetration—of heating steel with materials other than those which contain or supply nitrogen, experiments were made with anthracite, and also with good hard coke. The carbonaceous material in each case, together with the bar to be treated, was packed gently in one of the usual casehardening boxes, and after being carefully luted down the box was heated in a muffle for four hours at 900° C. After this heating there was found to be penetration to the following extent:

- a—Anthracite, 0.15 mm. on 6.5 mm. bar.
- b—Best hard coke, 0.16 mm. on 6.5 mm. bar.

As a result of heating a bar under exactly similar conditions, but using as a carbonizing medium burnt leather instead of the above, a penetration of 1.58 mm. was obtained. From this it will be seen that the effect of the nitrogenous mixture was to increase the depth of penetration during the initial stage of casehardening in the ratio of ten to one. Hence it will be recognized that nitrogen must play a very important part in the process of casehardening. Since nitrogen is a constituent of ammonia, the latter gas was used in a long series of experiments on casehardening, and it was found that the presence of ammonia aided the process of carburization. This same series of experiments led to the discovery of a crystalline structure in the ammonia-treated bars known as "twinning," which phenomenon aided the formation of a theory dependent on changes in the allotropy of the iron used in the experiment.

Practical Notes on Casehardening

The articles to be casehardened are placed in wrought iron boxes, about a foot high and 10 inches long and dep. Sometimes circular boxes are used, these having a diameter of about 9 inches. Any portion of the articles which is to be left soft is covered with a thick layer of clay. Having all the materials ready—steel

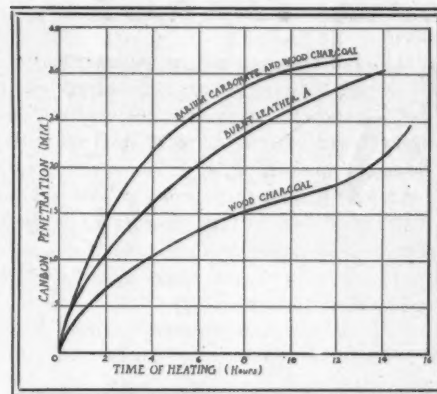
parts, clay for luting down the lids, hardening mixture, and pots or boxes—the workman can proceed to pack the articles. First, a layer of the casehardening mixture is placed at the bottom of the pot to a depth of a couple of inches. Above this rests a layer of articles. Then another layer of mixture, and so on till the pot is full.

Each layer of mixture is thoroughly rammed into position, but not so hard that it cannot be displaced by pressing the knuckles sideways along the top of the mixture. Having filled and rammed the box, the lid is luted down with a plentiful supply of red clay. Carefully noting the time and the temperature, the workmen then place the pots on the hearth of the furnace and increase the supply of the gaseous furnace heating fuel, until the pyrometer records the temperature of 900° C. This preliminary heating up may take as long as 4 hours—never less than three—and the length of time that the articles are supposed to be casehardening is counted only from the moment when this temperature is reached. Generally it



EXAMPLE OF GOOD CASEHARDENING

is found that by heating for 5 hours a good case is obtained, having a thickness of about 1/32 inch, and so at the end of that time, or longer if required, the pots are removed from the furnace and allowed



PENETRATING POWER OF VARIOUS SUBSTANCES

to cool. The articles are then taken from the pots and reheated. This is a most important operation, for the success of the subsequent hardening depends entirely on the time and temperature used for reheating. The time varies slightly for different articles. It is not noted until a fixed point—say, 825° C.—has been attained. This heating at 825° C. never exceeds 40 minutes, and is often as short as 15 minutes, after which time the articles are quenched either in oil or water, according to the hardness required. It is noteworthy that the articles to be reheated are not in contact with any non-oxidizing media, but are heated bare in the furnace. Although one might think that considerable oxidation would occur, yet in reality this is so slight as to be negligible.

As far as the casehardening department of a works is concerned, the operation is now completed, and the articles pass away to be polished before being returned to the machine shops whence they came.

MOTOR CAR TRADE SITUATION IN BELGIUM

The motor industry of Belgium is still passing through the crisis which has affected it for the last 6 months. All agree that at no time has the motor business been so bad in this rich country of 7,500,000 inhabitants. Official statistics have been published recently for the year 1907 for the five most important provinces or states of the kingdom; the other four provinces are only mentioned in a general way. According to the records of those five provinces, all told 2,641 new motor cars for pleasure purposes were registered with the local officials last year. Of this number there were 149 cars for which there is no record as to where they were built and they are simply referred to as miscellaneous. The official records show that the average price of each of the 2,492 cars with a complete record is 15,000 francs, of \$3,000, and it is estimated there were recorded about 1,000 cars in the other four provinces so the value of the cars registered in 1907, and thus considered as showing the sales of cars in Belgium for the past year, is estimated at \$10,476,000. Of the 2,492 cars regularly recorded there were 382 de Dion-Bouton cars, made in

France. Next on the list are the Belgian Germain cars with a total of 373; two other Belgian makes follow, the Vivinius with 239 to its credit and the Pipe with 151. The other cars recorded are: Renault, 141; Panhard, 121; Minerva, 90; Metallurgique, 88; Rochet-Schneider, 82; Darracq, 75; Mathieu-Saventhem, 38; Royal Star, 32; Brasier, 31; de Dietrich, 31; Delahaye, 31; Clement-Bayard, 31; Gobron, 30; Dasse, 30; Fiat, 24; Sizaire & Naudin, 23; Peugeot, 20; N-N, 20; Mors, 19; Ruhl, 17; Mercedes, 15; Berliet, 15; Ford, 11; Carron, 11. Other cars sold fair are the Decauville, Delaunay, Duryea, Hotchkiss, Humber, Serpollet, N. A. G., Prunel, Radia, Miesse, Aleyon, Hurlu, Aster, Napier, Auto-Mixte, Excelsior, etc. It is rather interesting to notice that 155 different manufacturers are represented among the 2,492 motor cars and that six of them—three Belgian and three French—disposed of nearly one-quarter of the total number of properly registered cars in Belgium last year. Another fact of even more importance is that more than 75 per cent of these is touring cars—seating four or more persons.



EXTERIOR OF HOME OF AUTOMOBILE CLUB OF FRANCE ON PLACE DE LA CONCORDE

IT IS now 13 years ago—February, 1895—since a mere handful of motoring enthusiasts, lounging, smoking and billiard vate residence in Paris, a meeting out of which came the foundation of the Automobile Club de France. Little did they think that such a powerful organization would emerge from what they thought at that time would be a mere local and social club. The motor car then was in its infancy, and what few "horseless vehicles" were to be seen elicited more mockery than applause or interest. Among those present at this historical meeting such names as those of Baron de Zuylen, Pierre Gifford, Marquis de Dion, Paul Meyan, Count Récopé may be mentioned. As may easily be inferred, the discussion was a friendly one, and before the day was over the Automobile Club de France had started what was to be an eventful career. A unanimous vote carried Baron de Zuylen to the presidency, and it is a remarkable fact to record that he has held the position ever since. A few weeks after the A. C. F. inaugurated its first clubhouse, which was beautifully located on the Place de l'Opera, right in the center of the town. And the new association began to grow fast, each committee meeting having to ballot several dozen candidates.

Nobody expects in this article a history of the motor car in France and its extraordinary development. One would have to repeat it in order to follow the A. C. F. along its course of prosperity, as both histories only make one. As a matter of fact, nothing worth recording has happened in motoring matters in France since 1895 without the club playing an important part in it. Before 1 year had elapsed after the foundation, the membership had reached 300, and 2 years later it was deemed necessary to move to larger premises. After much discussing and negotiating a place was found which enabled

the A. C. F. to rival with any club or association throughout the universe in the matter of a clubhouse. Everyone will agree that no finer place could be found than the beautiful mansions occupied by the A. C. F. on the Place de la Concorde, and which, by the way, are now the property of the club, a syndicate headed by Baron de Zuylen having made its acquisition and allowed the club to pay for it on the installment plan. The building comprises five stories and includes everything that one could expect to find in a modern clubhouse. Outside of big and luxurious restaurants, lounging, smoking and billiard rooms, library, and large meeting rooms, there is a magnificent hall used for festivities and also a regular theater with all stage and machinery fittings, where about 800 people can be seated in boxes and orchestra seats.

The actual membership of the A. C. F. is 2,300, and the annual subscription is 200 francs, or \$40, with an entrance fee of a similar amount. A few words about the organization or constitution of the Automobile Club de France will not be out of place here. It has been vastly altered since the days of the foundation, so as to cope with the growth and developments of what has become much more than the mere

pastime it was at first. The A. C. F. is now divided into two parts, which remain distinct as far as administration is concerned. They are: first, the social club proper or "circle," which is merely the same as an ordinary club; and, second, the promoting association or "Société d'Encouragement," whose aim is the general development and protection of the motoring industry, sport and pastime, and the promotion of races, contests, trials, shows, or any other event liable to further or favor same.

It may seem strange to state, however, that no member can belong to any of the allied associations without also joining the other. The reason of a nominal division is obvious. While the "circle," being considered as a purely sumptuary organization, has to pay heavy taxes, the "Société d'Encouragement" escapes these on account of its object and is, therefore, able to handle a lot of money and receive or expend big amounts. A committee of fifty members manages the "circle," and as its organization is pretty much the same as that of all clubs, there is little to say about it.

The constitution of the "Société d'Encouragement," which, to foreign eyes, appears and is really the A. C. F. itself, will be found much more interesting to study. It is managed by a committee of fifty members, which elects in turn from among its members themselves a board of nine directors, which governs the association and represents it in all circumstances. At present this board of directors or acting committee is made up as follows: President, Baron de Zuylen; vice-presidents, Marquis de Dion and Henri Menier; treasurer, Dehideux-Vernimmen; members, A. Ballif, Marquis de Cahseeloup-Danbat, Count de la Valette, Count Récopé and Gustav Rives. It may be here stated that there is no secretary on the board, since the secretarial work is done by a paid official, who, at the same time is at the head of the offices of the club. An idea of their importance can be gathered from the fact that no fewer than twenty-five clerks are employed by the various "commissions" or sub-committees, irrespective of the footmen and livery division, which numbers no fewer than seventy people. By the way, the restaurant of the A. C. F. is known among the best in town, and its chef draws a princely salary, having twelve men or boys in the kitchen under his orders.

But to return to the "commissions," as these represent one of the most remarkable parts of the system under description. Now it will be easily understood that in such a powerful organization, having to deal with so many different questions, the task of the members



ONE OF THE LARGE COMMITTEE ROOMS

of the board would be simply an impossible one should they try to personally confront every problem. Therefore, as the field of actions grew larger, and the A. C. F. scope of influence widened, it was found necessary to form sub-committees, or "commissions," as they are called in French, each of which was entrusted with a special subject. They number at present eight, viz.:

Commission des concours et fêtes extérieures, which has in charge the promotion of all trials and contests which are not of a purely sporting character; that is, in which speed is not the essential factor.

Commission des relations avec les automobile-clubs de province, which, as can be gathered from its name, corresponds and deals with provincial clubs.

Commission du contentieux, which deals with law and judiciary questions.

Commission des expositions, which has in charge the promotion of shows generally, and the big annual Paris show particularly.

Commission technique, dealing with all subjects of a purely technical order.

Commission de tourisme, devoted to everything connected with touring and questions relating thereto.

Commission du yachting automobile, whose name explains itself.

Last, but not least, the commission sportive, having the upper hand over purely sporting questions and whose chief work is the annual promotion and organization of the big annual speed contest known the world over as the grand prix de l'Automobile Club de France.

A remarkable fact about these various commissions, and more especially about the last named, is the almost unlimited power they have developed in the life and history of the A. C. F. Now, it would



S. A. MILES IN FRONT OF THE CLUB

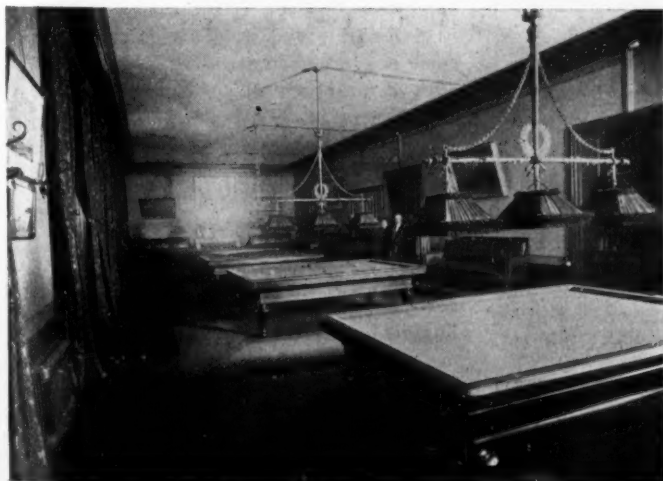
seem that they are to all intents entirely under the supervision of the board of directors, since they are formed by the said board, and could be suppressed by a decision of its members at any time. Be it as it may and explain it as you can, the fact is that these sub-committees have got to be entire masters of their line. Many a time have they taken or advocated measures which were not in harmony with the committee's idea, and the latter has invariably yielded to them. This peculiar situation is more remarkable with the commission sportive, whose members are very independent in their ideas, and the onlooker can even ask himself what would happen if the committee ever insisted on ruling over any of the commission's decisions.

Now, to foreign eyes, this commission

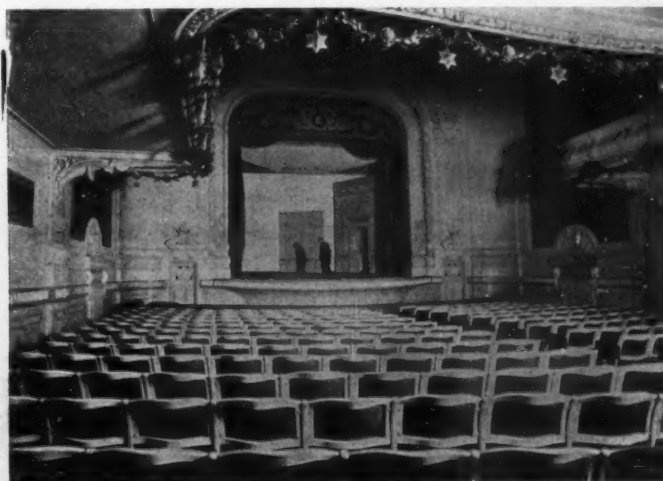
sportive represents, therefore, the A. C. F. itself to a great extent. It is the one which has the biggest international prestige in the French club, and one must admit that it fully deserves it on account of the pains taken by its leaders and of their undoubted abilities in the work they perform. Therefore, it will be found interesting to devote here a special study. The president of this sub-committee, which, in many ways eclipses the committee itself, is Chevalier René de Knyff, and the vice-president, Count Robert de Vogué, two of the best-known figures in international motor matters. The list of members is as follows: Prince d'Arenberg, Henri Brasier, Etienne Girard, Georges Huillier, Count de la Valette, René Doysel, Guionet de Léon, Louis Renault, Baron de Turekheim, while Messrs. Clément, Gobron and Bocandé are also entitled to a seat as delegates of the chambres syndicales, or makers' association. Now the observer cannot help being impressed by

the fact that this board which practically controls and manages motor racing in France is almost entirely made up of trade representatives, and, what is more, of the biggest firms and concerns.

A perusal of the above list would show that Panhard, Brasier, Charron, Renault, Dietrich, Clément and Gobron are all represented either by their heads or by some people holding prominent positions in the firm. Indeed, out of the above fourteen men, not more than four have no direct connection with the trade, and even then some of these four are known to hold some financial interests in the same. It will not, however, surprise many people to hear that the big success of the French racing generally can be put down to the good work done by these people. The old saying, "have millmen in the mill," is ever true.



SHOWING FRENCH CLUB'S BILLIARD ROOM



SMALL THEATER IN MAGNIFICENT CLUB HOUSE



The Readers' Clearing House



USE INTERMEDIATE SPEED MORE

Detroit, Mich.—Editor Motor Age—The general tendency of motor car design abroad is toward the smaller sized motor. While the roads of Europe are, as a general thing, much better than those in America, yet this in itself does not render possible the small sizes of motors, which are being used in fairly large cars over there. The fact that the foreign driver is much more willing to make frequent use of his gear shift has more to do with the problem than has good roads. In America the demand seems to be that the relation of motor power to weight of car must be such that the machine will go romping up the steepest kind of a hill upon the high gear. As a result of this demand American manufacturers are being forced to equip their cars with motors which cannot be operated economically upon any low or moderate road speed.

Not only is the first cost of the car increased by the necessity of building its component parts of such strength as to transmit the extreme power of the large motor, but any engineer will tell you that a large power plant cannot be operated economically when 90 per cent of its work is done at about half of its possible capacity. In other words, it is wasteful of both gasoline and lubricating oil to operate a large motor under conditions where only about half of its possible power may be utilized except at rare intervals.

Certainly, sooner or later, the American public will begin to realize, as have the foreign drivers, that it is much better to make use of the transmission which has been placed by the maker in the car for a purpose, than to demand a car with such motor equipment that it may be operated at all times without recourse to the intermediate gearing.

In an effort to meet the demand for a car which will climb any hill upon the high gear, the manufacturer is confronted by two possibilities, both equally bad. Upon the one hand he may equip a car with an abnormally large motor and upon the other hand he may so reduce the gearing between the engine and the rear axle that the car may perform satisfactory hill climbing feats upon the high gear. In the first case, there will occur the greater first cost of the large motor and of the heavy driving gear rendered necessary by this large motor. To this may be added also the cost of maintenance and the lack of efficiency under the ordinary road conditions.

In the second case, where the motor of a smaller or perhaps more proper size is geared down to such an extent that any kind of hill may be climbed upon the direct gear, it is very apparent that for

EDITOR'S NOTE—In this department Motor Age answers free of charge questions regarding motor problems and invites a discussion of pertinent subjects. Correspondence is solicited from subscribers and others

ordinary driving upon the level road, and especially if this driving be at all fast, the motor will be required to have an extremely high rotative speed in relation to the number of revolutions per minute of the driving road wheels. This extremely high speed tends, of course, to shorten the life of the motor, to render adjustment of bearings and other parts more frequent, to increase lubrication trouble, and to cause an unpleasant vibration to be felt by occupants of the car.

Would it not be much better to educate the American public along the line of European practice, building the motor car with an engine of moderate size and with a gearing between engine and drive wheels, which would insure to this motor a satisfactory rotative speed at the average driving speed of the ordinary operator? Such a construction would, of course, necessitate the use of the gear shift lever for hill work, but with the modern designs of gear shift, this certainly cannot be looked upon as a serious hardship. Certain it is that it would be far more sensible and far preferable from the manufacturers' standpoint, were this done, of course, saying nothing of the money saved to the operator and owner, both in first cost and in operating expenses.

Moral: Don't be afraid to make use of your gear shift lever. Have your car geared at a proper road speed; such that upon the level your motor is not racing itself to death and upon the hill do not be afraid to shift into your second or your first speed, as may be required. You will find that your machine will stand up better, and that it will be in your service every day instead of in the repair shop.—H. E. Coffin, Designer, E. R. Thomas-Detroit Co.

COMPLAINS OF PARTS PRICES

Stillwater, R. I.—Editor Motor Age—Knowing that the columns of the Readers' Clearing House are for the benefit of the Motor Age readers, I take this opportunity of expressing myself on what I call a regrettable condition in connection with the motor car business, namely, the trouble with manufacturers in buying parts at a reasonable price. My experience with four different cars in the last 8 years has given me ample opportunity for studying this



trouble. I have waited from 4 to 6 weeks for spare parts from a Detroit maker, and when they did arrive the price was excessively high. I own at present a two-cylinder car of 1906 style, which new and fully equipped cost me \$1,400. I think any good manufacturer from whom you buy a car should at least be fair with you after having invested so much with him. One experience will, however, show what repairs cost. The car runs well and is very reliable with respect to riding, but I noticed late last season, when I opened the relief compression valve in the front cylinder, a mist came out of the petcock when turning the motor over. I always overhaul my cars myself, and found the cause to be a very small crack in the casting inside of the cylinder near the exhaust valve, which, while not serious, was enough to lessen the power. The engine would run all right after starting, yet in cooling it would leak some. Of course it always got worse, never better. I wrote the company for the price of a new cylinder, and it quoted me \$30. It must be remembered that this is for the casting only, and not the piston rings, connecting rods or any other part of it. I wrote the factory a second time, but getting no more satisfaction, I dropped the matter.—J. L.

BOOKS AND BUGGY MAKERS

Ortonville, Mich.—Editor Motor Age—Would Motor Age publish in the Readers' Clearing House the name of a short treatise on motor car machinery, from which I can get a fair knowledge of the structure and parts of a motor car. At present I am ignorant of motor car construction, but would like to know something about them mechanically before purchasing. I practice medicine in a hilly, sandy country. I have been here for 35 years and know what kind of cars are best for districts of this kind. I should like a list of the names and addresses of makers of motor buggies.—William Aitheson.

A readable and simple book, which will give a good understanding of the principles of a motor car is "Motor Car Principles," by G. B. Whitman, published by D. Appleton & Co., New York. Another brief book well suited to this work is "Why and Wherefore of the Automobile," published by the Cleveland Automobile Institute. There are scores of other books on these subjects, but a little too voluminous for your purpose. The makers of motor buggies, with addresses and names of cars, are those marked with an asterisk, which have water-cooled motors, whereas the others have air-cooled motors: W. H. Kiblinger Co., Auburn, Ind., Kiblinger; Hatfield Motor Vehicle Co., Miamisburg, O., Hatfield; Holsman Automobile Co., Chi-

cago, Holsman; Schacht Mfg. Co., Cincinnati, O., *Schacht; Reliable Dayton Motor Car Co., Chicago, *Reliable Dayton; Success Auto Buggy Mfg. Co., St. Louis, Mo., Success; Monarch Machine Co., Des Moines, Iowa, *Monarch; Connecticut Automobile Works, New Haven, Conn., Fulton; Economy Motor Buggy Co., Fort Wayne, Ind., Economy; Postal Auto and Engine Co., Bedford, Ind., Postal; Mier Carriage and Buggy Co., Ligonier, Ind., *Mier; Victor Automobile Mfg. Co., St. Louis, Mo., Victor; Albany Automobile Co., Albany, Ind., Albany; D. W. Haydock Auto Mfg. Co., St. Louis, Mo., Cosmopolitan; Single Center Buggy Co., Evansville, Ind., Single Center; Bugmobile Co. of America, Chicago, Bugmobile; Chicago Coach and Carriage Co., Chicago, Duer; Reeves Pulley Co., Columbus, Ind., Gobuggy; Staver Carriage Co., Chicago, *Staver; International Harvester Co., Chicago, International; J. B. Lindsley & Co., Chicago, Lindsley; Neustadt Automobile and Supply Co., St. Louis, Mo., Neustadt; Everybody's Motor Car Co., St. Louis, Mo., Everybody's; A. B. C. Motor Car Co., St. Louis, Mo., A. B. C.; Union Carriage Co., St. Louis, Mo., Union; D. D. Snyder & Co., Danville, Ill., Snyder, and Zimmerman Motor Car Co., Auburn, Ind.

DRESSING FOR LEATHER

Crescent City, Ill.—Editor Motor Age—What preparation can I use as a dressing for the leather on the cushions and upholstery of my motor car? The leather is red and I would not want to put anything on which would cause the leather to crack or become streaked and soil the clothes of the passengers.—W. R. Nightingale.

Several concerns manufacture preparations which serve as dressings for the leather upholstery in motor cars, one of which is known as Miller's dressing, which can be secured by almost any of the motor car supply houses. None of these preparations which Motor Age has investigated has injured the leather in the slightest degree and does not soil clothes. One concern markets Nelson's morocco dressing suitable for red leather. Should the leather be faded, the same concern sells Nelson's enamel finish.

IS ACETYLENE PIONEER

Chicago, Ill.—Editor Motor Age—It was with some interest that I perused the article on the use of acetylene gas as a fuel in a recent number of Motor Age. In view of the fact that very little is known by the ordinary motor man of the ingredients and combustible properties of this product a few additional remarks on the subject may be of some further interest. It was the eminent French chemist, the late M. Henri Moissan, who first made acetylene a commercial article; however, I think perhaps it was left to our American enterprise to further improve on the form of its utility for lighting motor car headlights by supplying the gas in tanks in liquid form, thus doing away with the generator and its attendant troubles, to a

certain extent. It was some years ago that M. Moissan manufactured his calcium carbide, and it was principally by the aid of his electrical furnace. The ingredients used by M. Moissan in this instance was a mixture of lime or marble dust and charcoal and placed in his crucible where a powerful electrical current of intense heat was applied, thus fusing the mixtures into particles of great hardness, which we know as carbide. By the addition of water a gas was produced called acetylene gas. From that day to this we have been using carbide in great quantities, mostly in the granular form. However, great success has been obtained in this country in the use of autogas and similar tanks. Chemists tell us that acetylene is a hydro-carbon having the formula C_2H_2 , and that it is the hydrogen in the water and the carbon in the carbide—two opposites—which gives acetylene. An English chemist says liquefied acetylene if compressed about five or six atmospheres is practically unusable for motor cars, as it will explode vigorously if knocked about, as it forms the explosive substances cuprous or argentous acetylides. I dare say Mr. Avery would have a different view on the matter, as he certainly stores liquefied acetylene successfully in properly-prepared tanks. Perhaps Mr. Avery might tell us that his acetylene is passed through a solution of cuprous chloride in ammonia, or dissolved in acetone. I mentioned the above subject of storing gasoline as it may be that we are far in advance of our foreign confreres on acetylene products; however, acetylene gas as a fuel for motor cars has been experimented with in both France and Germany for some years; also in England to a slight extent. On the continent it is well known that a mixture of twelve parts pure air and one part acetylene will result in a very powerful explosion. Mr. Avery suggests that best results through a carburetor are obtained by 97 per cent of air and 3 per cent of acetylene. In Germany acetylene has been tried as fuel in both the liquid and

granular forms, however the liquid form of using acetylene is not generally adopted, a preference being given to the generator and the lump carbide. Herewith is a try who are building taximeter cabs at the present time?—Harry A. Lord.

MAKERS OF TAXICABS

Los Angeles, Cal.—Editor Motor Age—Would Motor Age in Readers' Clearing House give the names of some of the prominent manufacturers throughout the country who are building taximeter cabs.—Harry A. Lord.

Some of the builders of taxicabs in this country are the E. R. Thomas Motor Car Co., Buffalo, N. Y.; Elmore Mfg. Co., Clyde, O.; Jackson Automobile Co., Jackson, Mich.; Oakland Motor Car Co., Detroit, Mich.; Atlas Automobile Co., Springfield, Mass.; Palmer & Singer Mfg. Co., New York, N. Y.; Cadillac Motor Car Co., Detroit, Mich., and H. H. Franklin Mfg. Co., Syracuse, N. Y., which build light town cars along taximeter lines.

CORRECTS WIRING METHODS

Mason City, Ia.—Editor Motor Age—In the Readers' Clearing House April 16 I note the question asked by Mr. Harrington, of New Castle, Del., regarding his single-cylinder Cadillac. His lack of compression, lack of power and popping, which he speaks of, may all be caused by his spark plug not being put in properly. One of our customers recently had this same difficulty and we found this to be the cause.—Hathorn Auto Co.

Motor Age will appreciate it if the Hathorn Auto Co. will send a diagram illustrating the trouble.

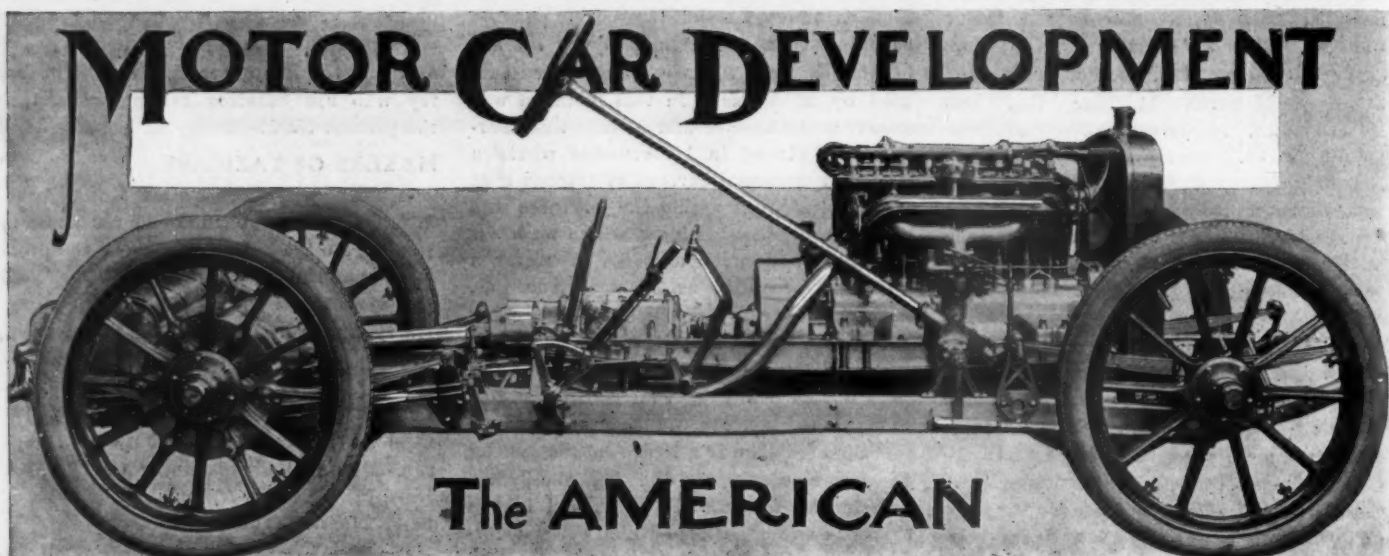
SECRETARY O. M. L.

Duluth, Minn.—Editor Motor Age—Let me have the name and address of the secretary of the Ontario Motor League as soon as possible.—H. H. G.

E. H. Wilcox is secretary of the Ontario Motor League and is located at the Stair building, Toronto, Ont.



THE LATE HENRI MOISSAN, A PIONEER IN ACETYLENE



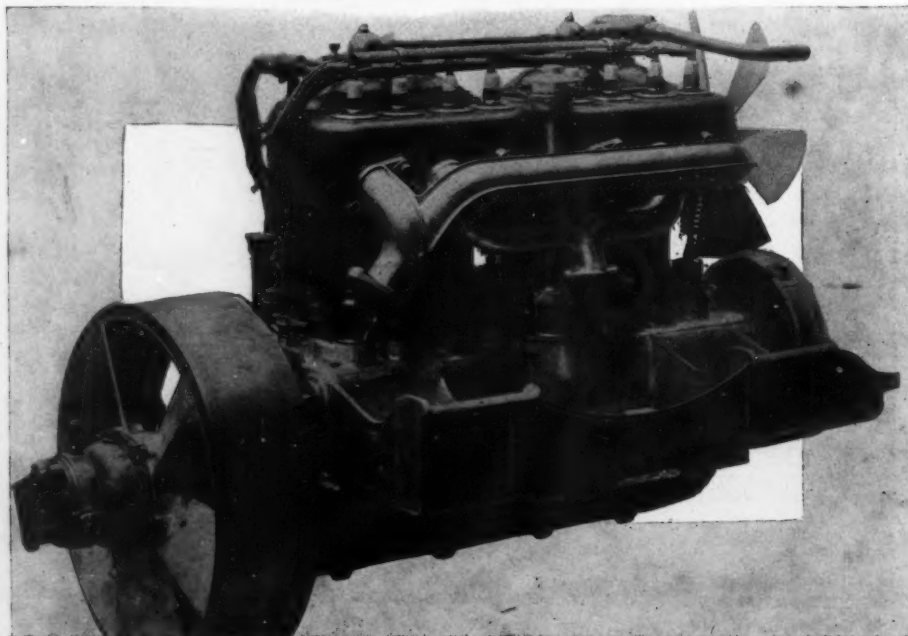
THE American Motor Car Co., Indianapolis, Ind., has shown that progressiveness so characteristic of American builders by bringing out roadster and touring car models, and neither of these has lost any of the features which made it conspicuous in the 1907 season. The roadster uses the under-swung frame, the touring cars the frame carried above the axle. Four American models are marketed. One is a 40-horsepower type carried over from 1907 with not a few 1908 refinements. This 40-horsepower style is built in roadster and five-passenger touring car forms. The two new models are mounted on a 50-horsepower chassis; one is a roadster, the other a seven-passenger touring car, the roadster style having, as in the case of the 40, the underswung frame. These 50-horsepower chassis stand for the representative '08 product of the factory, in that they are new models, having been made in only small quantities

during the past season, in which time the 40-horsepower chassis were the standard construction. A few differences exist between the 40 and 50, foremost in which is the use of a four-speed and reverse selective gearset in the 50 and the adherence to a three-speed progressive set in the 40. Besides the underswung frame the roadsters differ from the touring cars in that the latter employ a rear platform spring, whereas semi-elliptics are in regular use in the front and rear in the roadster. The touring car and roadsters in the 40 and 50 models vary slightly in wheelbase, the 40 roadster wheelbase measuring 106 inches, whereas the touring car is 116; in the 50-horsepower chassis the roadster wheelbase is 110, but the touring car measures 124 inches, this additional length giving ample opportunity for the use of two additional tonneau seats. According to A. L. A. M. rating the 40 chassis with its 5 by 5-inch cylinders

works out exactly 40 horsepower, but the 50 chassis, with its $5\frac{1}{4}$ by $5\frac{1}{2}$ -inch cylinders, comes to 44.1 horsepower, this motor, however, differing from the smaller in that its stroke is $\frac{1}{4}$ -inch in excess of the bore of the engine.

The American motor follows that conventional type employing cylinders cast in pairs, with valves carried in expansion chambers on the right side and open through direct lift from a camshaft carried within the crankcase. A neat disposition of the motor parts has been accomplished by carrying the Schebler carburetor centrally on the right and the timer on the top of a vertical shaft between the twin castings on this side. This arrangement, together with a simple Y intake and a one-piece exhaust manifold, carried outside of the intake, leaves the majority of the valve springs fairly accessible. On the left side of the motor is less congestion, there being only three essentials, the magneto at the rear, the centrifugal water pump slightly in advance of it and a cylindrical reserve gasoline tank in the space between the cylinder pairs. The water pipe from the pump crosses between the cylinder castings and has the usual branches connecting with the bottom of the valve chambers, where the cool water contacts with the hottest parts of the castings. The return water pipe branches after leaving the forward jacket to right and left, one uniting with the top of the radiator at the right and the other at the left.

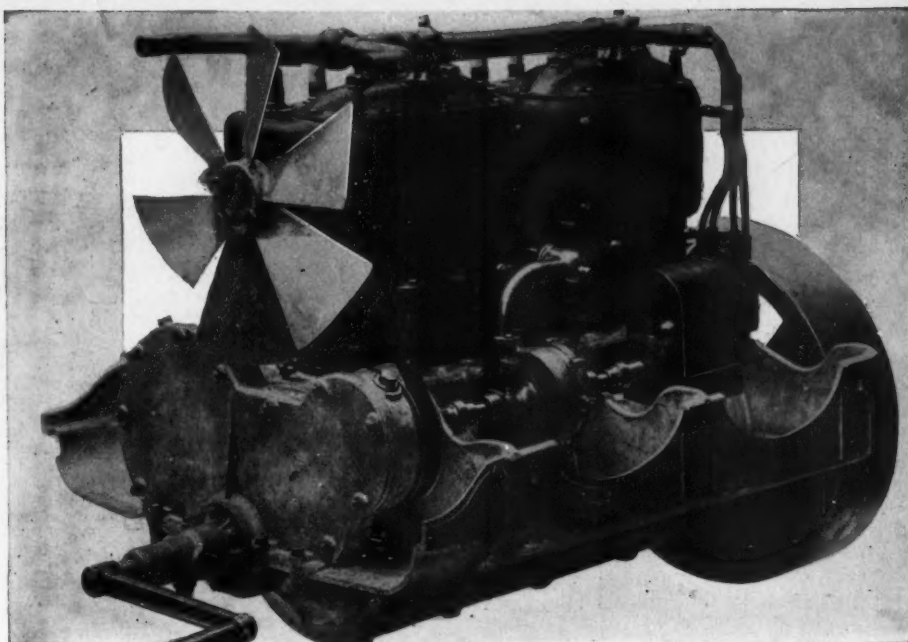
Aside from these general motor marks, there are a few interesting details about it that remove it from the realm of pure conventionality. The top half of the crankcase serves as a pan or mud apron construction and in the touring models rests directly on the side members of the frame, thereby eliminating a subframe construction; whereas, in the roadsters a superframe is required. The gears at the forward end of the crankshaft and camshaft are of the spiral type, running in



VALVE AND IGNITION SIDE OF AMERICAN TOURIST MOTOR

oil, and instead of keying these to the shafts they are coupled to flanges on the shafts. The crankshaft pinion is steel, whereas that on the camshaft is built up of fiber and grey iron. A novelty not to be overlooked is that the belt driving the fan passes over a large pulley on the forward end of the pump and magneto shaft, the belt being entirely in the rear of the housing for the halftime and other gears, so the front of this housing is not pierced by the protruding ends of any shafts other than the crankshaft. Use is made of separate cams keyed and pinned in position; the camshaft is carried on a bronze bearing between adjacent pairs of cams and the bearings are of slightly different diameter in order to permit of an endwise movement of the shaft when taking it out. A change over 1907 construction is carrying the timer on a vertical shaft beneath the dash. This driveshaft is encased in an aluminum housing, the top end of which is anchored and the lower end is a shoulder fit into a pocket in the crankcase. The vertical timer shaft is arranged with a slip joint in it, and at the lower end carries a worm which meshes with a worm wheel on the camshaft; by the use of a lever with ball end which bears against a ball thrust washer, the lower end of the timer shaft and the worm can be moved upwards or downwards, thereby changing the worm's position in the threads of the worm wheel and so advancing or retarding the contacts of the timer, while the exterior of the timer, to which the wires are attached, remains stationary. This construction of advance and retard in modified form is used on not a few leading foreign and domestic cars, and the advantage claimed for it is the stationary wires connecting from the coil with the four contacts of the timer.

Use is made of a double ignition system, employing two sets of plugs located respectively in the caps over the intake and exhaust valves, the high-tension wires to which are neatly housed in a large di-



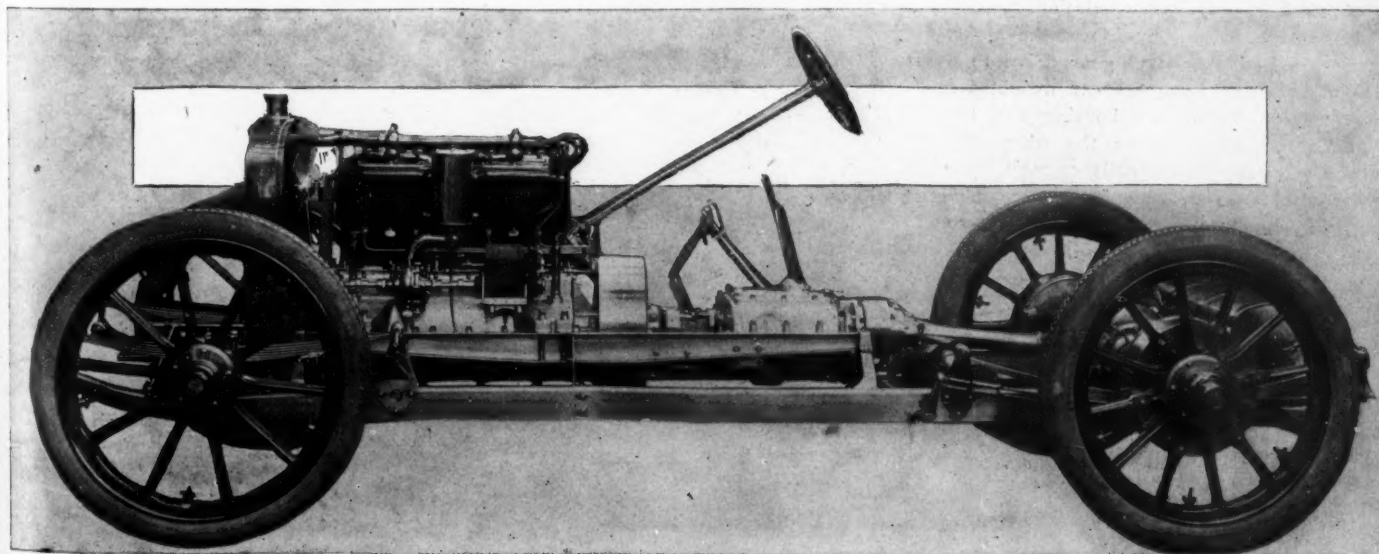
PUMP AND MAGNETO SIDE OF AMERICAN TOURIST MOTOR

ameter tube carried above the cylinder heads. In this tube are only six wires, those for the two plugs in the rear cylinder not entering it. Current for one set comes from a high-tension Simms-Bosch magneto with contained distributor, and for the other set from a storage cell.

Motor lubrication is effected through a five-feed lubricator, located under the floor boards in the touring car and housed within the hollow dash in the roadster. The oil supply reaches the four cylinders as well as the crankshaft bearings and further augments the usual splash system.

In the cooling of the motor a few strictly American constructions are found; the water enters the cylinder jackets at a point on each side of the exhaust, the aim being to equalize the cylinder temperatures. The fan is supported on ball bearings carried on a small shaft supported at the end of an arm clamped to a boss on the front cylinder casting, which arrange-

ment allows the removal of the fan without disturbing other parts; the blades are made integral with the aluminum hub. The fan belt, made 1-inch wide, can be adjusted by loosening a cap screw and swinging the fan support on its journal. The radiators employed are very narrow, oblong, vertical copper tubes, the efficiency of which is increased by the addition of a piece of sheet copper from which there is cut small corrugated fins, these fins being attached to the tubes by immersion in a solder bath. Additional cooling is accomplished in the touring car by using a fan-blade construction in the flywheel, which is not adopted in the roadster machine. There is quite a difference in the number of square inches front area of the radiators fitted to the different models, which, however, is practically equalized by variation in depth from front to rear, the radiator for the touring cars being $4\frac{1}{2}$ inches deep, whereas the roadsters use

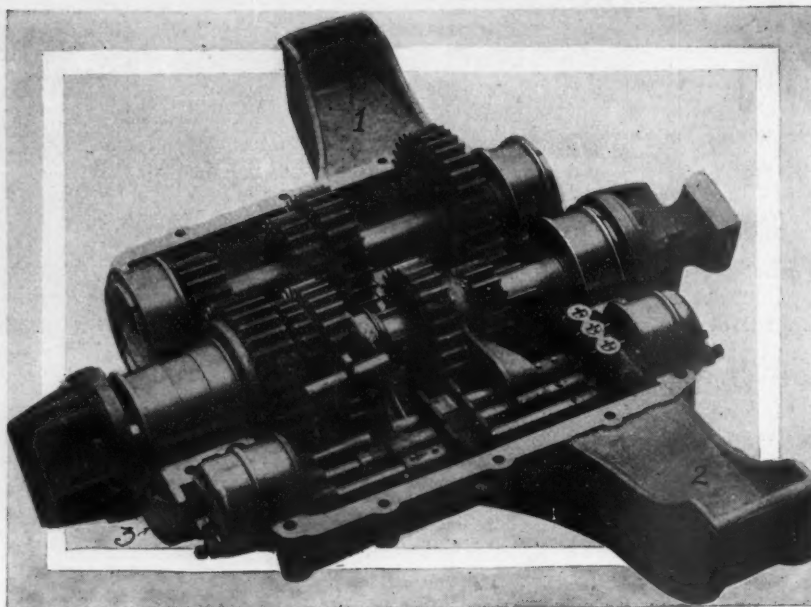


THE UNDERSWUNG FRAME EMPLOYED FOR THE SECOND SEASON ON AMERICAN ROADSTERS

but $3\frac{1}{2}$ -inch depth. It is when coming to the transmission part of the car that the several changes over '07 construction appear, namely, the employment of selective gearset as well as that of double expanding brakes, acting within the same rear wheel drums, the expanding members being located side by side and made with the same diameter and width. The selective gearset, that for the touring models illustrated herewith, has the main and countershaft carried side by side in the same horizontal plane and carries the shafts on annular ball bearings.

The reverse drive pinion revolves only when being used; the three shifting rods for obtaining the different speeds are carried within the case and possess the usual interlockers. The case, made in upper and lower halves, has a three-point support in the touring car model, these points being at opposite front corners and at the rear center, the last point being on a drop crosspiece of the frame. In the illustration they are designated 1, 2 and 3. The transmission support in the roadster chassis is somewhat different, due to the use of the subframe members. The cone clutch used in all models is held in engagement by a spring made from $\frac{1}{4}$ by 1-inch flat stock wound spirally, the thrust of which is taken by large ball bearings encased in the hub of the clutch and packed with non-fluid oil. Between the clutch and gearset is a square end coupling made in halves to facilitate adjustment of the spring. This coupling also makes it possible to remove the clutch without molesting the motor or transmission.

The rear axle construction of the American cars includes bevel gear drive to a floating type of axle, the car weight being carried on the axle housing and the axle driveshaft revolving the wheels by means of square inner ends engaging the differential and square outer ends engaging the jaw clutches. The upper half of

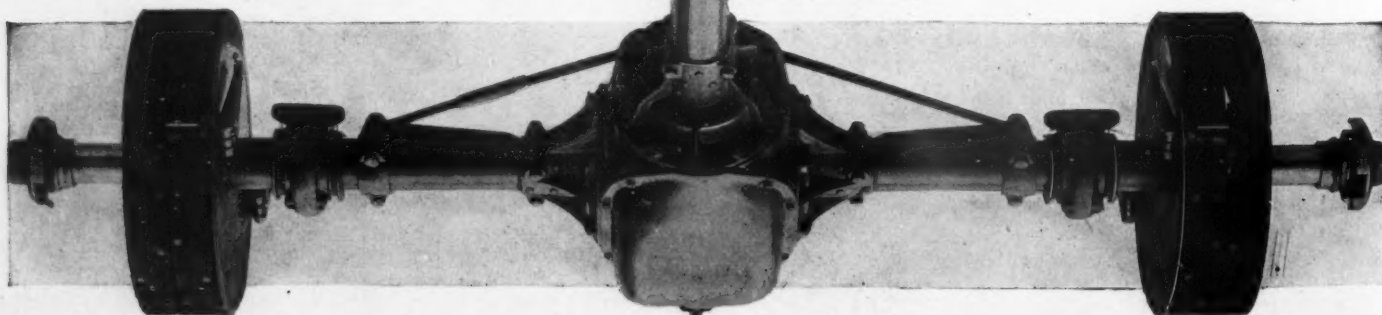


NEW FOUR-SPEED AMERICAN SELECTIVE GEARSET

the differential housing is removable for accessibility and the housing proper has heavily ribbed end pieces in which are clamped the axle sleeves and also a forward end piece of similar design which receives the tubular housing for the driveshaft.

On each of the rear wheels is a double set of expanding brakes located side by side and operating within the same steel drum. The two brakes are exactly alike and work under similar conditions all the time excepting in that the expanding shoes are pivoted at diametrically opposite points, one at the front and the other at the rear, the studs forming the supports, each not only acting as a support for one of the brakes, but a portion of it being formed into an expanding cam for applying the other brake.

In a resume of the running gears of both

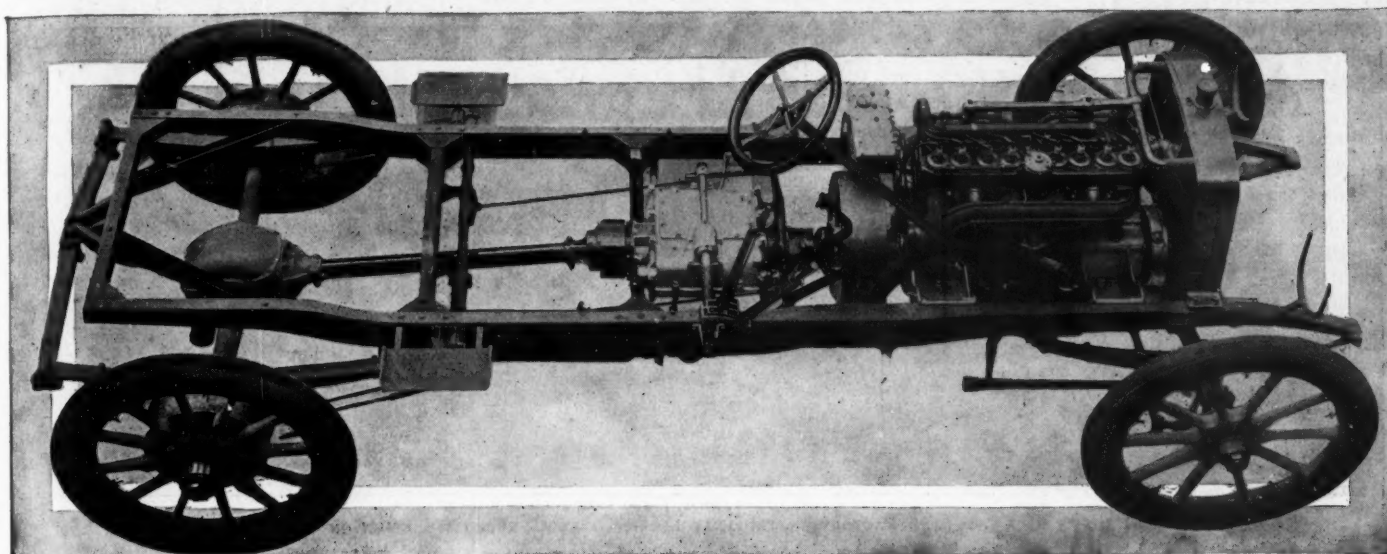


AMERICAN REAR AXLE EMPLOYING TWO SETS OF EXPANDING BRAKES

cars it might be noted that the frame employed in the touring cars consists of the side members of three crosspieces, the former having a 5-inch vertical depth, a $1\frac{1}{4}$ horizontal width and manufactured of $\frac{1}{8}$ -inch stock; there is a rise in the side members of $2\frac{1}{2}$ inches in front of the rear axle, which is done to increase the possible range of action of the platform spring. Supporting the rear cross member, the center of which carries a triangular bracket, which bears upon the center of the transverse spring, are two long diagonal braces extending from the side members at a point

ahead of the rear axle. In addition to the three cross members already mentioned, the crankcase further acts as a tie for the front of the frame, and the gearset serves a similar purpose midway of the side members. On the Tourist frame the rear end of the front springs, instead of shackling direct as is generally done, are connected by a cross-head type of shackle. The roadster frame embodies side members narrowed at the dash as well as a pair of straight supplementary superframe pieces raised higher than the mainframe members and on which supplementary pieces are carried the motor and gearset. In this frame construction the forward springs are placed on top of the front axle, with their rear ends carried in a fixture riveted to the upper side of the frame, and their front ends linked to the end of the frame. The semi-elliptic rear springs are revolvably mounted on the back axle, with their forward ends connected to brackets on the upper side of the frame and their rear ends connected to a crossbar which passes completely across from one sill to the other one of the car.

With this construction the company claims that if the spring breaks at the forward end as the bolt comes out, the frame simply drops about an inch and no material damage is done; in fact,



CHASSIS OF AMERICAN TOURIST CAR WITH FRAME CARRIED ABOVE AXLE

the further claim is made that for demonstrating the cars are often driven with the forward end of one of the front springs unsupported. Should the front end of both springs give way, the claim is advanced that the front axle position is maintained by the rear ends of the springs, which drive the axle through their rear rigid connection to the frame. In spite of the use of this drop-frame construction the car has a clearance of 10¼ inches, the under side being protected by a practically flat shield plate.

In the 40 roadster 36-inch wheels carry 3½ and 4-inch tires; the 40 tourist, with the same diameter wheels, uses 4-inch pneumatics front and rear; in the 50 roadster the sizes are as in the 40; but in the 50 Tourist 4 and 5-inch sizes are in use in front and rear.

STRIKE TROUBLES IN ITALY

A general strike affecting every manufacturing plant where metal workers are employed is now causing much loss, especially to motor car manufacturers of Turin, Italy. Only one plant—that of the Itala—is strike-free, this company having made new arrangements with its employees some time ago after a strike which lasted several weeks, and which was only ended by the firm stand of the company's officials, who discharged every worker which belonged to the metal union. Because of the new strike there now are some 7,000 men idle, of which 1,500 are from the Fiat works, 800 from the Fiat foundries and 400 from the Fiat commercial vehicle plant; at the Diatto-Clement works 125 men are on strike; at the plant of the Italian Peugeot there are about 100 out; at the plant of the S. P. A. 240 men left work and there are 450 on strike at the Rapid works. At the Taurus body works forty strikers left, while from 3,000 to 3,500 men are striking in some thirty-five other concerns more or less directly related to the motor industry. The causes of the strike are varied, but one of the principal reasons is

that the manufacturers have offered an entirely new set of agreements to the workmen without the latter having been consulted or given the privilege of making counter propositions. The strikers through their officers of the unions have declared they will not go back to work unless the employers agree to consult them before putting the new rules into effect. This the employers refuse to do and some say they prefer to go out of business rather than have the workmen dictate to them in these matters.

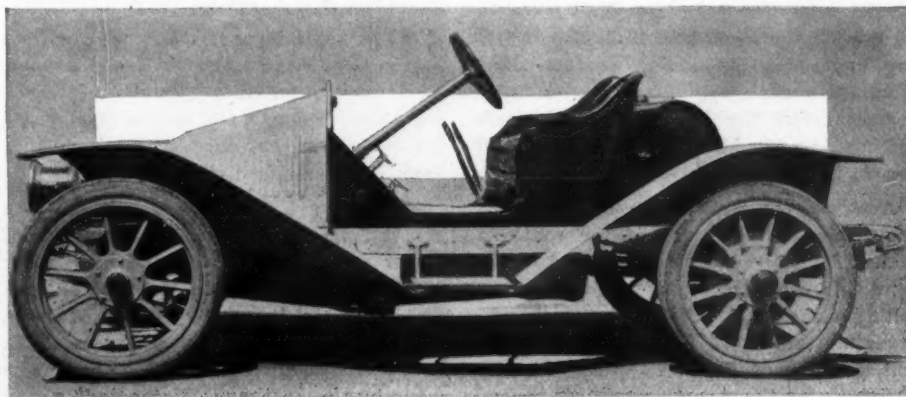
OUTLOOK IN BRAZIL

The United States government's foreign trade promotion bureau, impressed with the fact that plans for securing to American manufacturers more effective trade representation in Brazil than has thus far been secured, recently dispatched a special agent to that country for the purpose of gathering information to aid American manufacturers. In a report just received the special agent says that during the past year not fewer than eight large motor car manufacturers in the United States have had special agents in Brazil, but as yet not one of them has been successful in establishing an agency that does any business for the manufacturer. None of the concerns which has taken

agencies of American motor cars is in a position to establish a repair shop and garage facilities, because such a course involves an outlay that the present demand for any particular make of American car does not warrant. As long as these conditions continue Brazilians will buy other than American cars. It is not reasonable to expect individual manufacturers to establish branch houses in Rio de Janeiro, but certainly there are enough American cars of various makes to warrant the establishment of a repair shop and garage especially for American cars. This, it would seem, might be made a legitimate function of the A. L. A. M. and the A. M. C. M. A. and it is believed that if one of the organizations should do this much good would result from the effort and that business could be had.

NEW P. & S. SKIMABOUT

The Palmer & Singer Mfg. Co. has its new Palmer-Singer skimabout on show in New York. The car is 28-30 horsepower and is of a short wheelbase which makes it particularly well adapted for city use, it being turnable in the narrowest streets, and well fitted to take advantage of openings in traffic. Its power is ample for tours into the country. The company will make twenty-five cars of this model.



ONE OF THE PALMER & SINGER'S NEW SKIMABOUTS



NOON HOUR AT THE OVERLAND FACTORY IN INDIANAPOLIS—THREE HUNDRED WORKMEN ON THE STAFF

Barrett a Locomobilist—

Charles Barrett, formerly with the Electric Vehicle Co., has joined the sales department of the Locomobile company, with headquarters at the factory in Bridgeport.

Livery Company Incorporated—

The Chicago Auto-Livery Co. has been incorporated and will have its headquarters at 2920 South Park avenue. It will operate two garages and will use White steamers in its business.

Change of Address—The Empire Tire Repair Co., of Chicago, has moved from 1301 Michigan avenue to 1615 Michigan avenue.

Quaker Agent for Babcock—Prescott Adamson, Philadelphia agent for the Columbia and Renault, has taken on the agency for the Babcock electrics in the city of Philadelphia.

Grout Prosperity—The Grout Automobile Co., of Orange, Mass., is running its plant 6 days a week and has increased its staff of workmen. A Chicago agent, the Garfield Park Auto Co., Douglas boulevard and Harrison street, has just been appointed.

Promotion for J. S. Johnson—John S. Johnson, former champion cyclist and skater, who has been assistant manager of the Winter branch in Pittsburg, working under his old racing partner, Earl Kiser, has been appointed Winton sales representative for Minnesota. Johnson's old home was in Minneapolis, so he is well known in his territory.

Acme in the South—The marketing of the Acme in the states of the southern seaboard will be greatly facilitated in the near future by the organization of a new selling company at Savannah which will cover the states of Georgia and Florida and portions of South Carolina. It will be known as the Acme Motor Car Co., of Georgia, and its manager will be John E. Pinney, of Savannah, who has been for



CONSIGNMENT OF OVERLANDS READY FOR SHIPMENT

several years a successful operator in the retail field at that point and who is well known in the state.

Deeds Made President—G. E. Deeds has retired from the firm of Deeds & Manley, of St. Louis, to become president of the Union Carriage Co., of that city.

Jones' St. Louis Representative—Benjamin Gerdelman has been appointed recently the St. Louis representative of the Jones Speedometer Co. Gerdelman will still remain agent for the Witherbee Igniter Co., with which he has been associated for some years.

Change of Name—The Cleveland Cap Screw Co., of Cleveland, O., has changed its name to the Electric Welding Products Co., to more fittingly cover its line of work. Edward Busby, formerly with the Midvale Steel Co., is now connected with the concern's selling department.

Mends Old Lamps—The Auto Plating and Mfg. Co., of Cleveland, has moved its quarters to the upper floors of the Ohio Motor Car Co.'s garage on Euclid avenue. The company makes a specialty of repairing battered lamps, and it has developed a large business, not only in Cleveland, but from all over this district.

Will Make Tire Shoes—According to a report from Elmira, N. Y., puncture-proof motor car tire shoes invented by Stanley North, former foreman for the Elmira Arms Co., in its motor car department, may be manufactured on a large scale in that city. It is said that if the test to be made by the La France Motor Car Co. and several individual drivers proves a success then the proposed factory is assured.

D. W. Cook Changes—

D. W. Cook has resigned as superintendent of the Western Tool Works, of Galesburg, Ill., and has taken a partnership in the Galesburg Automobile Co., of Galesburg.

Sackett Out With Matheson—

Louis J. Sackett has severed his connection with the Matheson Motor Car Co., of Wilkes-Barre, for which concern he has been acting in the capacity of special agent.

Representation for Stoddard—The Connecticut Steel and Wire Co., agents for the Reo in Hartford, Conn., has taken on the Stoddard-Dayton, which heretofore has been unrepresented there.

Back to Boston—W. V. Neilsen, who went west a year ago to the Rambler factory and later was in New York with the Hol-Tan company, has returned to Boston and is now with the Rambler company there. Before he left Boston he had the agency for the Moon cars.

New Garage in Cleveland—The establishment formerly occupied by the Holmes-Booth Co. on Euclid avenue, Cleveland, has been taken over by M. E. & H. A. Steere, who were formerly employed by the Cleveland Elmore branch. They will conduct a garage and repair place. The establishment has a charging plant.

Will Be the Hol-Tan—C. H. Tangeman, of the Hol-Tan company, has gone to Stoneham, Mass., to inspect the factory where the new product of the company will be built. The car, which always has been known as the Shawmut, will, as handled by the Hol-Tan company, be called the Hol-Tan. It will differ only in name from the established product of the company and will be constructed, as heretofore, largely from imported Krupp chrome-nickel steel. Mr. Tangeman states that an order was placed the afternoon of the Briarcliff race with the Shawmut Motor Co. for a number of these cars and work has already been begun on these. This

order will be followed by a larger one at an early date.

Chicago Concern Moves—The Auto Parts Co., of Chicago, dealer in engine parts, has moved from 27 South Clinton street to more commodious quarters at 99 West Monroe street.

Dolson Selling Austins—W. E. Dolson, formerly with the Dolson Automobile Co., has been appointed assistant sales manager of the Austin Automobile Co., of Grand Rapids, Mich. W. S. Austin of that company is about to make a visit to his eastern agencies.

Busy at Overland Plant—It is reported that the Overland factory at Indianapolis is turning out five cars per day and employing 300 men. The company also announces that from March 1 to April 29 it had produced nearly double the number of cars it had built in the last 5 years.

One More Quaker Concern—One more new establishment made its appearance on Philadelphia's row last week—the Auburn Motor Car Co., with quarters at 441 North Broad street. F. Leibfried, Jr., and H. W. Trump are at the head of the new concern, which will handle the Auburn.

Out of Motor Trade—Alfred N. Robbins, for several years in the motor business in Boston, where he handled the Springfield, Atlas and Thomas cars, has gone to Lewiston, N. Y., where he has become identified with the Porter Fibre Bottle Co. His brother, Lincoln D. Robbins, will conduct the motor agency in the Hub alone hereafter.

Firestone Enlarges—The middle section of the Firestone plant at Akron, O., has been completed and filled with both pneumatic and solid tire machinery. It replaces the small one-story structure which was the original factory and is the fourth and largest addition within the past 4 years to a plant devoted to the manufacture of rubber tires, it is claimed.

Kiblinger Busy—The motor buggy department of the W. H. Kiblinger Co. is running night and day, it is reported, and all the available machinists in the surrounding country have been employed. For the past several weeks the company has been building ten motor vehicles a day and hopes to increase this number. At the present rate of output it has orders booked to keep it busy 24 hours a day until June 1, it is stated.

Benson Succeeds Metzger—Ernest R. Benson on April 30 succeeds William E. Metzger as sales manager of the Cadillac Motor Car Co. Benson was with the Pope Mfg. Co. for 12 years and rose to be secretary of one of the companies. He was with A. G. Spalding for 7 years. In 1896 Mr. Benson went with the Hartford Rubber Works, opening its Boston branch, and soon had charge of the New England territory for that company. He remained with it for 11 years and became secretary for the company, having charge of the commercial end of the business. His con-

nection with the Cadillac Motor Car Co. began December 1, 1907. Mr. Metzger intends to devote all his time to his own affairs.

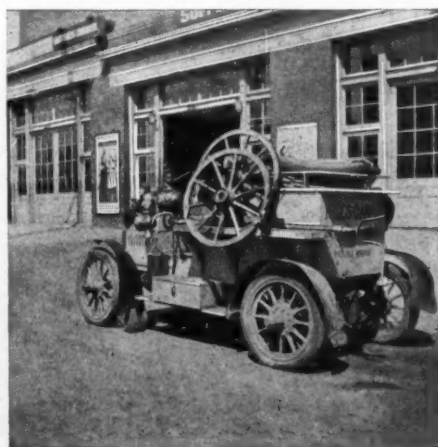
Building in Buffalo—A. C. Bidwell, jobber in motor car supplies in Buffalo is erecting a fireproof garage.

Mitchell Agent Moves—The Penn Motor Car Co., Philadelphia agent for the Mitchell, has moved to new quarters at 138-140 North Broad street. The former location at Broad and Ridge avenue was too far removed from gasoline row activities to suit Manager Walter Cram.

Moves to Burlington, Wis.—E. D. Verstraete has removed from 421 Clinton street, Milwaukee, to Burlington, Wis., where increased facilities for the manufacture of parts have been secured. Mr. Verstraete also makes a specialty of designing mechanical devices for specific purposes.

Has a Trouble Wagon—John T. Shannon, manager of Rice's garage at North and Madison avenues, Baltimore, has put a trouble wagon on the road, utilizing an old two-cylinder machine. The cylinders were rebored, the transmission changed to a fast high and a good pulling low, while a unique body, consisting of three drawers and a box under the mechanic's seat, was fitted. The trouble wagon is equipped to care for road jobs and also for towing. It carries 300 feet of rope, pulley blocks and a full kit of tools, including sledge hammers. The wheels are fitted with a heavy wagon axle.

Matheson Wins Case—Judge Archibald of the United States circuit court at Scranton, Pa., rendered a decision April 30 in favor of the Matheson Motor Car Co. in the case of Frederick S. Dickinson, of New York, vs. Matheson Motor Car Co., it is announced. Dickinson brought action against the Matheson company for \$16,000 stock of that company, which he claimed due him for services rendered by him in behalf of Charles R. Greuter in securing for Mr. Greuter his position with the Matheson company, and for which the jury returned a verdict in favor of Dickinson for \$16,000 and interest. The verdict of the jury was suspended by Judge



JOHN T. SHANNON'S TROUBLE WAGON

Archibald, of the United States court, and was set aside April 30 by Judge Archibald, who returned a verdict in favor of the Matheson Motor Car Co., annulling the decision in favor of Dickinson.

Oakland in New York—The Hamilton-Kull Co., of 1677 Broadway, New York, in addition to the Aerocar line which it is at present carrying, has accepted the New York agency for the Oakland car, which is made in Pontiac, Mich., by the Oakland Motor Co.

Improving Old Plant—Improvements which will cost in the neighborhood of \$20,000 are contemplated by the Olds Motor Works, of Lansing, Mich., it being the intention to build a two-story stock building 90 by 160 feet, a garage 30 by 60 feet and a new plank testing track.

Bergdoll Adds Two Lines—The Bergdoll Motor Car Co., of Philadelphia, which in its big new North Broad street establishment has been representing the Benz, Berliet, Welch, Imperial and Reliance truck, last week took on two new agencies—those for the Oakland and the Rauch & Lang electric.

Perrett Out—William M. Perrett, who has been for 8 years in charge of the Detroit branch of the Diamond Rubber Co., has severed his connection with that concern and has moved his headquarters to 842 Woodward avenue, where he will handle the output of the Empire Auto Co.

Avery Has Chicago Branch—The Avery Portable Lighting Co., of Milwaukee, Wis., has established a branch house in Chicago and George D. Armstrong, late of the Diamond Rubber Co., has been appointed manager. The location of the branch temporarily is at 390 Wabash avenue, with the Levy & Fanning Co., but a Michigan avenue store will be secured at an early date.

Motor Tradesman Fire Victim—W. A. Pitcher, of Fort Wayne, a traveling representative for S. F. Bowser & Co., of that city, met death early last Sunday morning in the fire that destroyed the New Aveline hotel at Ft. Wayne. Pitcher was well known in northern Indiana, especially in the motor trade. Before going with the Bowser people he was an expert for the Standard Oil Co., with headquarters at Duluth, Minn.

Wise Expressman—A Hartford expressman a short while ago purchased for a small sum a two-cylinder commercial car. The original owner had been indiscreet in the way he used the car and consequently experienced more or less trouble. In a fit of disgust he sold out to the expressman. The latter put the car in shape, studied it from one end to the other and became familiar with every part of it. The result is he gets maximum service much lower than he did with horse teams. Not only that, but he has found it a paying investment and he tackles anything in the moving line up to the capacity of the vehicle.



The Realm of the Commercial Car



FROM investigations made into the position of the motor omnibus on the London streets at the present time, it appears as if the motor movement in this particular branch is on the eve of a crisis. In order to thoroughly understand the situation it is necessary to briefly survey the history of the motor bus. It is some years since self-propelled cars of this sort were first put on the London streets, but the machines tried were quite of an experimental kind, and were not found suitable to place upon the road in numbers. In 1905, however, a satisfactory vehicle was discovered in the Milnes-Daimler, and, with a swoop, the London Motor Omnibus Co. placed these cars, appropriately christened *Vanguards*, on the London highway, and made a determined effort to capture the affections of the public. But, although the directorate showed itself to be thoroughly business-like in most matters, it made one great mistake. The public would have patronized the motor bus gladly on account of the extra speed, and the increased comfort of traveling, but, not deeming these attractions sufficient to win the battle, the false step of price-cutting also was taken. It was quite unnecessary, but the prospects were supposed to warrant the move. The horse companies had to follow suit, and a fierce war was waged. The result was, as so often happens with keen competition, that the field was spoiled for everybody. It was only at the close of 1907 that an attempt was made to recover the lost ground, and, as was only to be expected, the public did not like it. The man who would willingly have paid a penny for a certain distance 3 years ago now makes a fuss about doing so, after he has been in the habit of traveling a longer distance for the same money.

The London General and the Road Car companies, the two largest concerns operating horse omnibuses in London, strove might and main to get delivery of chassis to compete with the new company. The former ordered a large number of de Dion-Bouton vehicles, and the latter pinned its faith to Büssing buses, an English model of which was shortly afterwards and now is being built by the Bristol firm of Straker-Squire. Numerous other companies were formed under such names as the District



FIAT TAXICAB IN A TIGHT CORNER

London Bus Situation

Motor Bus Co., the London and Provincial Motor Bus and Traction Co., the Motor Bus Co., the Great Eastern London Motor Omnibus Co., the London Central Omnibus Co. and the London Power Omnibus Co.

The London General and Road Car firms got delivery of their chassis quicker than was expected, and in point of numbers began to overhaul the London Motor Omnibus Co. When the competition was at its keenest the last named absorbed the first three of the smaller companies mentioned and blossomed forth as the Vanguard Motorbus Co., with a total number of vehicles which gave it a great pull over either the London General or Road Car concerns.

Price cutting, the scarcity of good drivers and other difficulties gradually eliminated the weaker firms, and one by one they fell out of the fight. The most important of these to go under was the London Power Omnibus Co., which was operating the Cricklewood and Elephant and Castle route.

At the present time, therefore, the chief companies are the Vanguard Motorbus Co., with 360 vehicles; the London Road Car Co., with 222; the London General Co.,

with 221; the Great Eastern Co., with fifty-seven, and Thomas Tilling, with thirty-two, a total of 892. There are one or two smaller concerns still operating, however, and some of them have made arrangements to increase their stock considerably. At present they have about forty vehicles among them, giving a grand total of between 930 and 940. It is impossible to give more definite figures, as they change from day to day. New cars are being put into

service constantly, and others taken off; some to go into permanent retirement, others to come out again in an improved form and running condition.

The Vanguards are mostly Milnes-Daimlers, supplemented by some de Dions, and lately some Armstrong-Whitworth buses, made by the well-known engineering firm of Sir W. G. Armstrong-Whitworth & Co. The Road Car Co. employs Straker-Squire, Büssing and a few Maudslays; the London General use de Dions, Straker-Squires, Büssings, Wolseleys and a few Clarkson steamers. The Wolseleys are being rapidly increased, a big contract having been entered into. The Great Eastern employs Straker-Squires only, and Thomas Tillings' buses are mostly Milnes-Daimlers. The London Central Co. has ten Leyland motors, the Metropolitan Steam Omnibus Co. ten Darracq-Serpellet steamers, the Electrobuses Co. seven electric vehicles and the Amalgamated Motorbus Co. four Brush cars.

As the first in the field on a big scale, the Vanguard company naturally has shown the most up-to-date ideas. In addition to painting the destination, and points touched on the route, over various parts of the bodywork, it inaugurated a system of numbering its services. Thus, the buses carry big white tablets on the front, sides and back, bearing, in black, the figures 1, 2, 3, etc. This company also was the first to give its cars a pet name painted along the side panels of the body, and, although the other firms have followed the Vanguards in naming their vehicles, they have not copied the numbering. A rather queer title was that of the Victoria Omnibus Association, which called its cars the *Old Vics*. They have shared the fate of some of the others, and disappeared from the streets.

The most hotly contested



ONE OF THE GREAT EASTERN MOTOR BUSES

route is that between Cricklewood and the Elephant and Castle, on which some fifty buses ply. It is worked by Vanguards and Generals, and a very frequent service is maintained. The writer recently counted twelve cars going in the same direction, namely, down Shoot-up Hill, in the space of 5 minutes. This also was the route of the London Power Omnibus Co. before that concern went under. The competition is very keen, and unfortunately racing between the rival drivers sometimes takes place. The greatest number of cars on any one route is that on the Putney and Bow Bridge line, which is served by some sixty Union Jacks.

It is a point of interest that no motor 'buses yet compete with the horsed 'buses running on the 1-cent routes, as even in such cases as where the latter journeys are taken in as part of long-distance routes, there is with the motors, no charge under a penny. A good idea is that of the Elec-

street before the vehicle could be moved away. That part naturally has been greatly strengthened in later models, and rarely gives trouble. Breakdowns often appear more serious than they are owing to ignorance on the part of the drivers, but that, too, is being remedied. At first drivers were not allowed to interfere with the mechanism, but had to send for the expert repairers, but some of the companies have now taken the step of combining driver and mechanic and entrusting their chauffeurs to do the repairs where possible. The trouble with the Clarkson steamers, of which only a few now are plying, was that they were great offenders as regards side-slips. On a muddy day they have been seen to turn around, facing the direction from which they were coming, and, although all motor buses are rather ready to skid, the steamers named were the worst in that respect.

Nearly all the companies have excel-

1906, but since then the financial position has been wrapped in mystery. The \$5 ordinary shares stand at 31 cents, the non-cum. preferred 6 per cent at \$1.25 and the \$500 debentures at 45. The Road Car and General companies, ever since they adopted mechanical traction, have fallen. The Road Car 30 shares in 1905, were 6% at their highest and 5¼ at their lowest. In 1906 they were 6% and 3%, respectively, and in 1907 3¼ and 2½, respectively. Their present price is 2¼, buyers, and the \$500 4 per cent first mortgage debentures are 87. The London General stock in 1905 was 129 highest and 99 lowest; in 1906, 117 and 80, respectively, and in 1907, 82 and 37, respectively. The present price is 41, and the \$500 4 per cent debentures, redeemable in 1934, stand at 80. The position generally is one of great anxiety, and there is no immediate hope of the tension being relieved. Matters were complicated, too, by a strike among the men



HORSE-DRAWN BUSES ARE GRADUALLY BEING FORCED OUT AT PICCADILLY CIRCUS BY THE MOTOR

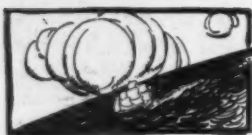
trobus Co., which captures the city traffic during the business hours of the day, and, in the evening, runs to the suburb of Brondesbury, being well patronized by paterfamilias going home, and later by the theater folk.

The first weak point to assert itself in motor bus construction was that part of the frame just behind the engine in the chassis which were built on orthodox lines, that is to say, with the motor in the front, under a bonnet. After a certain amount of use, it was noticeable that the side-members of the frame at that point began to sag, and the vehicles presented the peculiar appearance of turning their noses in the air. So serious did this become that one car, which ran its bonnet into a slight collision, became immovable, as the frame of the motor was knocked V shaped and touched the ground. A traveling forge had to be requisitioned and the frame heated and bent in the middle of the

lent systems of overhauling the cars. At the finish of their work the drivers hand the vehicles over to the cleaners and repairers, who work on them all night if necessary, and have them ready by the time the drivers come for them again next day. By this means it is not often necessary to keep many cars in garage, and the buses owned are mostly earning their keep. Two of the more recent companies which report great freedom from mechanical trouble are the Metropolitan Steam Omnibus Co., which operates fourteen Darracq-Serpollets, and the Electrobus Co., whose seven electrically propelled vehicles find much favor.

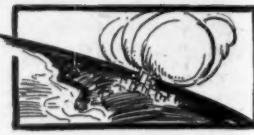
The position of most of the companies using motor omnibuses is known to be unsatisfactory, but it is very difficult to secure detailed information on this point. The Vanguard Co., when as the London Motor Omnibus Co., paid dividends at the rate of 10 per cent per annum up to June,

employed by the Road Car Co. Hitherto the men have been paid by the day, and the new rule was that they should be paid by the journey. They estimated they would make less out of it, and struck. The change in system was inevitable, as, when the men were paid by the day, they would sometimes make a big job out of a trivial breakdown, and seize the opportunity to take a prolonged rest, or, in plainer language, to waste the company's time. Payment by the journey is undoubtedly a fairer system, especially, as in this case, special provision is made for payment during a breakdown which is not due to the driver. Moreover, in making this move, the Road Car Co. was only getting into line with the system of other London companies. It is a significant fact that before the strike the Road Car company's buses were seen standing idle by the roadside more often than the other companies' vehicles.



From the Four Winds

N S E W



Glidden at Genoa—C. J. Glidden was reported at Genoa, Italy, May 2, at which time his odometer showed a total of 45,883 miles. He goes to Paris by way of Nice and Lyons.

New Frisco-Los Angeles Record—A new record from San Francisco to Los Angeles has just been set up by a 30-horsepower White steamer, which made the 478-mile trip in 17 hours 17 minutes, or 56 minutes better than the previous record, which had stood for over a year.

Tires in the Briarcliff—A statement made in the last issue of Motor Age that "Leland also suffered one puncture in the fourth lap (of the Briarcliff race) and two blowouts in the fifth lap" is denied by the Pennsylvania Tire Co., whose tires Leland used, the company declaring that "there were three of our tires changed during the race—one front tire in which a large nail had been run and which was in danger of puncturing the tube, and two others which had been chafed on the side by reason of the rims not fitting properly, which caused them to chafe on the side chains."

White Withdraws Protest—Walter C. White has written to Chairman Thompson of the racing board of the A. A. A. formally withdrawing his protest made in connection with the hill-climb of the Wilkes-Barre Automobile Club on Decoration day of last year. Mr White takes this action in order that the Wilkes-Barre club may receive a sanction for its hill-climb scheduled for May 30 next. The conditions which the racing board decreed should be fulfilled by the Wilkes-Barre club have not been complied with, but Mr. White surrenders his rights in the matter rather than prevent the hill-climb being held on Decoration day.

Some Observations by S. A. Miles—From S. A. Miles, general manager of the N. A. A. M., who is now touring Great Britain and the continent with a Pierce-Arrow, comes a few observations: "I have been greatly impressed by the enormous number of buses and cabs in use in London," he says. "Horace Bell, who is well remembered in the states, is the manager of the cab company which has 505 cabs in operation. These cabs run at 20 miles an hour through the traffic, and are, I should say, the greatest advertisement the motor car ever has had. The buses are less noisy and less frequently disabled than when I was last here. The touring facilities available in London at the headquarters of the Automobile Association are most excellent. Just at present there is a row on between the A. A. and the Royal Automobile Club, a lordly thing which seeks to enjoy the

power of veto, etc., over which the rank and file is rebelling. To accomplish general good motoring organizations must be democratic in character, and this holds good both on this side of the water as well as in America."

Ordered to Shoot Tires—A number of drivers having failed to stop when requested, Chief Robert Metzger, of the Indianapolis police, has ordered his motor cycle cop to adopt wild west methods and fire bullets into tires if necessary to make the drivers stop. Officer Gibney, mounted on a two-cylinder motor cycle, has made more than thirty arrests recently, and it is he who will be permitted to perforate the atmosphere and tires with bullets.

Elmore in Glidden—One of the entries in the Glidden tour will be a regular stock model Elmore two-cycle touring car, which was received by the San Francisco agents of the Elmore company on March 3, 1906. This car has been driven in every race meet, road race, hill-climb and endurance race in southern California since its receipt by the Elmore company. In every endurance run it has made a perfect score, it is claimed. In the 50-mile motor Derby in Los Angeles on May 12, 1907, this particular Elmore won the cup. Its next big victory was on the occasion of the 30-mile Lakeside Motor Derby race, in which carrying its full load in regular touring order, it made the 30 miles in 39 minutes. To date the car has run over 16,000 miles.

Four-Day Carnival—The recently-formed Monroe County Automobile Association of Pennsylvania intends to hold a 4-day carnival during the last week in June. A reliability run to Stroudsburg, Pa., possibly under sealed hood conditions, starting simultaneously from New York and Philadelphia for trophies and gold medals for the drivers will form the curtain-raiser of the carnival. Stroudsburg will be the central point of destination, too, for motorists from all sections of Pennsylvania who will be on hand to participate in the interesting and ambitious program of events set for the following days. Hill-climbing will form the attraction for the second day. A steep grade at the Delaware Water Gap extending a trifle over a mile has been selected. The third day of the carnival is to be devoted to time trials over a perfect stretch of road in the neighborhood of Mount Pocono. A ½-mile track in the immediate neighborhood of Stroudsburg will be the scene of operations on the fourth and closing day of the carnival. Here a gymkhana contest will provide amusement for the multitude. Obstacle, umbrella and apple races, spearing, ball-driving, teetering and

other contests and a general average spin on the track with high speed in are scheduled for competition and the finale will come with a general parade of competing cars with prizes offered for their all-round appearance after the strenuous contests of the previous days.

Michel Werner Dead—Cable advices from Paris state that Michel Werner, credited with being the inventor of the motor cycle, is dead. M. Werner, who had retired from business, was 46 years of age and had been suffering from paralysis of the brain.

Minnesota Reliability—On May 29 and 30 the Minnesota Automobile Club will hold a 300-mile endurance run under the rules of the American Automobile Association. Colonel Frank M. Joyce, president of the Minnesota organization, has received notification from more than twenty-five owners that they will enter the contest. The contest will be under the direction of judges from the outside. The start will be made from Minneapolis and the cars will proceed to Mankato, Minn., and return and then from Minneapolis to St. Cloud and return, the complete trip totaling 300 miles.

Political Tour Planned—Roger C. Sullivan, national Democratic committeeman from Illinois, has arranged a motor car tour from Chicago to the Democratic convention in Denver next July. The party will go in four Studebaker touring cars, accompanied by a Studebaker commercial truck carrying the baggage, leaving Chicago June 27 and taking about 7 days for the trip. A stop will be made at the home of William Jennings Bryan in Lincoln, Neb. This will mark a new departure in the way of convention travel, Mr. Sullivan planning to take with him the congressmen and delegates from his section of Illinois.

Novel Challenge—Brick Kuhn, representing the Holsman in Omaha, has issued a novel challenge, which so far has not been accepted by H. E. Frederickson, at whom it was aimed. Kuhn proposes that he and Frederickson appear before a committee, Kuhn with the Holsman and his rival with the Thomas, Rambler or Mitchel, which he represents, and that Frederickson take the Holsman and try to put it out of commission in 30 minutes, while Kuhn was to be given the same opportunity to queer Frederickson's car, the only tools to be used being pliers. At the end of 30 minutes each was to take his own car, put it in order without any aid, drive to Fremont and return, the last one back being the loser. Omaha is much interested in the def.



News from the Motor Clubs



Omaha Gets Busy—A hill-climb is billed for May 30 by the Omaha Automobile Club.

Danish Club Election—The Denmark Automobile Club has elected the following officers: President, General V. Raabye; vice-president, V. Ludvigsen; secretary-treasurer, E. Kinch; sport committee, H. Meyring, H. Block, A. A. Timm; technical committee, V. Ludvigsen, L. Bendixen, T. T. Nielsen.

Wanted, a Home—The Kansas City Automobile Club is still hunting for a home. At the last meeting one was offered near the city limits, but it was decided that the place chosen should be not less than 10 nor more than 15 miles from the city, on some good road. A committee is looking after the matter. Fourteen new members were taken in last week, making the total membership about 200.

Keeps Old Quarters—The Minneapolis Automobile Club has decided to re-enter its old quarters at the Plaza hotel. In the spring conditions at the Plaza did not appear to be entirely satisfactory and efforts were made to establish headquarters at the West hotel. Some of the members who preferred to remain at the Plaza organized what was known as the Parkaway Club. In order to restore perfect harmony and keep the forces of the motorists united it was decided to go back.

May Raise Age Limit—At the suggestion of Leroy Mark, secretary of the Automobile Club of Washington, the city fathers of Washington, D. C., are considering the advisability of raising the age limit of motor car drivers from 16 to 19 years. The district commissioners believe too many minors are being permitted to drive cars about the city, the result being that numerous complaints of reckless driving on the part of such minors are being sent in. If the age limit is raised it will also apply to motor cycle operators.

Bay State Program—The Bay State A. A. has made up its program partly for the race meet to be held at Readville on May 30, and J. C. Kerrison has been appointed manager. The races on the regular list provide for gasoline stock cars, but it is expected that in the match events, of which there will be two or three, some of the steamers may compete. Barney Oldfield probably will be induced to drive in some of the races. Motor cycles will have a chance in two of the events. The program is as follows: Five-mile, open to stock gasoline touring cars of from 24.1 to 40 horsepower; 5-mile, open to stock touring cars from 40.1 to 60 horsepower; 5-mile, open to all gasoline runabouts irre-

spective of horsepower; 20-mile, open to stripped stock chasses; 5-mile handicap.

Minnesota Flourishing—Efforts are being made to increase the membership of the Minnesota State Automobile Association to 1,000 members. Branch clubs have recently been formed in Waseca, Kenyon, Austin, Northfield, Stillwater and Alexandria by the state association.

Has Creditable Aims—A club was organized in New Albany, Ind., on April 4 and styled the New Albany Auto Club. John S. McDonald was elected president, Dr. C. P. Cook vice president and Dr. R. S. Rutherford secretary and treasurer. The club starts off with thirty-five members. The club desires to work with the farmers for good roads and with the city for better streets.

Seeks Tour Route—The touring committee of the Bay State A. A. is looking about for a place where the members may go on the first club run of the season. No date has been selected yet, but it will probably be the Bunker hill day anniversary, as the race meet on May 30 will keep everyone at home. Some place along the north shore will be chosen perhaps, or the tour may extend to New Hampshire.

Combines With Whisters—A partial combination has been formed by the members of the Automobile Club of Maryland and the Baltimore Whist Club, by which each club's members become members of the other organization, and use the same meeting rooms jointly. There will be no merger, each organization retaining its present identity. The Baltimore Whist Club, however, will hereafter be more familiarly known among the motorists as the whist section of the Automobile Club of Maryland.

Activity at Bridgeport—With the advent of "good going" the Automobile Club of Bridgeport, of Bridgeport, Conn., is exhibiting an enthusiastic activity. Plans are being rapidly worked up for the proposed climb at Sport hill May 30. Entry blanks have already been issued by the club and the lists are filling rapidly. Arrangements will be made by the committee if possible to have the course guarded by a company of militia, insuring that the crowds will be kept in check. At the recent annual meeting of the club the following officers were named for the ensuing year: President, Frank T. Staples; vice-president, F. A. Strong; secretary, F. W. Bolande; treasurer, L. B. Powe. Silas Burton, Ralph M. Sperry and A. K. L. Watson were named as governors. Under an amendment to the constitution the board of governors was increased by six members. The following were elected:

De Ver H. Warner, Charles B. Read, Dr. H. S. Miles, J. B. Lyford, F. A. Rantz and J. T. Fray.

Will Build Country Home—The Minneapolis Automobile Club is to erect a country home on the banks of the Minnesota river, 15 miles out of the city. Ten acres of land have been purchased. The members are subscribing funds to defray the cost of the undertaking. The club house and land will cost approximately \$20,000.

Club in Omaha—The motor enthusiasts of Omaha held a meeting at the Hotel Rome on April 28 and organized the Omaha Automobile Club, the following officers being elected: W. R. McKeen, Jr., president; F. Kolpitzer, first vice-president; Frank Palmer, second vice-president; G. N. Dietz, treasurer; L. McShane, secretary; L. Nash, T. A. Fry, A. P. Guiou, H. L. Cummings, directors.

Run in Rhode Island—The Rhode Island A. C. has made plans for its first outing of the season, when next Saturday all the members who have the time will make a trip to Tudor farm, Sharon, Mass., a run of 28 miles from Providence, for a day's outing. There will be a luncheon served at 1 o'clock, after which the members will discuss the motor law now being pushed in their state and outline plans to fight it. In case it is a stormy day the run will be held a week later.

Jenkins Won Over—James T. Drought, secretary of the Milwaukee A. C. and the Wisconsin A. A., says that Wisconsin motor men have changed their opinion of James J. Jenkins, of Chippewa Falls, Wis., chairman of the house committee on judiciary, since he and President Neal Brown appeared in the interests of the federal bill. "Congressman Jenkins is not opposed to the bill, as we thought," said Mr. Drought. "He told us he appreciates the need of a bill of this kind, but he has been cautious because of the grave constitutional problems involved." In view of this Mr. Jenkins probably will get the support of northern Wisconsin motorists for re-election.

Will Label Roads—The Spokane Motor Association is preparing to label every good motor road out of the city with arrows. A plan has been worked out whereby the drivers can tell by the color of the arrows at a cross road where the road leads to. For example, the road to Cœur d'Alene will be marked with arrows of one color, while those leading off to Newman Lake will be indicated by another color, Hayden Lake by another arrow, Medical Lake by another, and so on in such a way that the driver can tell without stopping to read a signboard where the road leads.



Brief Business Announcements



Topeka, Kan.—J. M. Padgett has opened a garage and supply house at 118 East Sixth street.

Cleveland, O.—E. C. Sturtevant has opened a repair shop on Euclid avenue, near Lake View.

Boston, Mass.—The General Automobile Co., of Boston, has been incorporated with a capital stock of \$1,000, and will deal in motor cars.

Boston, Mass.—Stade & Farrow, who recently organized to handle the Grout in this city, have established headquarters at 94 Massachusetts avenue.

San Jose, Cal.—C. H. Letcher has opened up a new garage and will do a general motor car business. He is to act as agent for the White, Packard and Cadillac.

New York—Plans have been filed for remodeling the old stable at 14 West Sixty-sixth street into a six-story garage. The alterations are to be made for the owner, Whitney Lyon.

Newark, N. J.—Percy H. Johnston has leased the City Hall garage, at 9-11 Hill street. It is to be operated in connection with the present business on 265 Halsey street.

Boston, Mass.—Harry H. Woolaver, who has been connected with the Columbia branch in this city for the past 5 years has gone to Hautsport, Nova Scotia, where he will go into the motor boat business.

Albany, N. Y.—The City Motor Car Co., of Mt. Vernon, has been incorporated with a capital stock of \$20,000 to operate a garage and deal in motor supplies. The incorporators are F. A. Kateley, H. C. Fordham and R. L. Kateley.

Pittsburg, Pa.—On May 11 application will be made for a charter for a new concern to be known as the Belden Motor Car Co. to engage in manufacturing motor cars, carts and all accessories. E. H. Belden, T. I. Corcoran and E. D. Nevin are the applicants.

Atlanta, Ga.—The Maxwell-Briscoe company is to have a branch in this city. Application has already been made for a charter for a company to be known as the Maxwell-Briscoe Southern Co., and at its head are to be Joseph M. Austin, C. E. Adams and S. C. Austin.

New York—Another taximeter cab company is in process of organization. It is to pay particular attention to the theater service, and is to be known as the Front Drive Motor Car Co., and is backed by W. Gould Brokaw, Walter Christie and Morris Gest, a theatrical manager. The company will have a capital stock of \$250,000, and ground is to be broken at Twenty-third

street and the North river for the factory plant within the week. Walter Christie is the inventor of the new car.

Chicago—The Times Square Automobile Co. is located now in its new building at 1332-1334 Michigan avenue.

Denver, Col.—A new garage is to be built at Eighth and Downing streets for Charles E. Johnson.

Oakley, Kan.—A daily motor bus route is to be started between this town and Garden City. It is to be backed by an eastern capitalist.

Madison, Wis.—The Milwaukee Automobile Livery Co., of Madison, filed an amendment to its charter, changing its name to the Bland-Mueller Auto Co.

Brooklyn, N. Y.—The Pioneer Garage Co. has been incorporated with a capital stock of \$5,000 to operate a garage. The incorporators are J. L. Eddy, Loring Van Hoff.

New York—The Surprise Automobile Horn Co. has been incorporated with a capital stock of \$5,000. The company will have its factory and salesrooms at 236 West Fifty-fourth street.

Albany, N. Y.—The Jamaica Motor Car Co., of Hillside Branch, Queens county, has been incorporated with a capital stock of \$1,000. J. A. Jones and F. B. Anderson are the incorporators.

Des Moines, Iowa—A large two-story addition is to be erected to the plant of the Mason Motor Car Co. during the coming summer. The company recently increased its capital stock from \$50,000 to \$100,000.

Cleveland, O.—An agency is to be established for the Oakland. Milton A. Hugges has been appointed manager of the agency, and will make his headquarters at the garage of the Metropolitan Motor Car Co., though the latter concern will have no connection with the management of the other company.

Newark, N. J.—The new garage and salesrooms of J. W. Mason, at 350-352 Halsey street, has been opened. The new building is equipped with every appliance for handling cars, including a complete machine shop, electric elevator and turntable. Mr. Mason is agent for Maxwell and Stoddard-Dayton.

Indianapolis, Ind.—The Union Embossing Machine Co. and the Speed Changing Pulley Co., which are at present located in a factory at East Washington and Davidson streets, are to commence the erection of a plant at Anderson, Ind., about May 10. The company will make gasoline motors, carbureters and speed-changing machinery. E. S. De Tamble is the president of both companies.

Berlin, Wis.—E. C. Deibier and F. H. Russell have formed a partnership and will establish a motor car factory here.

Lansing, Mich.—The Reo Motor Car Co. has declared a dividend of 20 per cent to its stockholders.

Lansing, Mich.—The Quick Reliable garage, of Port Huron, has been incorporated with a capital stock of \$5,000.

New York—Schedules in bankruptcy of the Mercedes Import Co. have been filed, showing liabilities of \$228,755 and nominal assets of \$261,514.

Cleveland, O.—In the future the Holmes-Booth Co. will be under the management of Henry Steere, formerly connected with the Empire garage on Carnegie avenue.

Utica, N. Y.—On May 1 the Electric Garage Co. is to remove from its present quarters at 7 Court street, to the building on Cornelia street, known as Dr. Waton stables.

Newark, N. J.—The Livingston-Ramsdell Motor Car Co. leased a garage in the De Camp building, at 284 Halsey street, and will act as agent for the Palmer & Singer cars. Arthur Newton will be manager of the company.

Buffalo, N. Y.—George Salzman, who has been assistant manager and superintendent of the E. R. Thomas Motor Co., severed his connection with that company, and has gone to Atlanta, Ga., where he will act as treasurer and manager of the American Motor Car Co.

Rotterdam Junction, N. Y.—A movement is on foot to establish a motor bus line from Amsterdam to Schenectady, operating through South Schenectady. It is proposed to have a capital stock of \$10,000, and application will be made for a franchise to operate under either steam or electric power.

Beatrice, Neb.—C. C. Jones is the head of a company which is shortly to commence the manufacture of motor cars in this city. The concern is to have a capital stock of \$75,000 and work is to be begun at once on the erection of a factory building. Local capitalists are backing the enterprise.

Mexico City, Mex.—Endeavors are being made to gain a concession for a motor car line between San Diego, Cal., and Ensenada, Lower California. Byron Hall, president of La Prosperidad Colony Association of the California peninsula, has been conferring with the government officials, and if the concession is granted will start a line of freight and passenger motors, using 75-horsepower cars, and making the round trip in less than a day. There is no railroad between these points, and all business

must be carried on by steamships, making communication between the two cities very slow.

Newark, N. J.—Floyd Krebs has opened a motor cycle and tire agency at 39 William street.

Allentown, Pa.—In the future the Hamilton garage is to be known as the New York garage. J. Harold Thomas has been appointed manager.

Albany, N. Y.—The Regal Motor Car Co., of New York, has been incorporated with a capital stock of \$50,000 by H. Amerman, F. P. Rawle and J. C. Austin.

Dover, Del.—The Maxwell Taximeter Co., of Wilmington, has been incorporated with a capital stock of \$500,000, and will buy, sell and deal in taximeters and patents for fare collectors.

Albany, N. Y.—The Buffalo Sight-Seeing Co., of Buffalo, has been incorporated with a capital stock of \$50,000. It will conduct a motor car livery. The incorporators are Gibson Howard, H. M. Breed and F. J. Weber, Jr.

Trenton, N. J.—The Autobus Co., of Camden, has been incorporated with a capital stock of \$1,000,000, and will engage in the manufacture of motor cars, etc. The incorporators are T. R. Hansell, W. F. Eidell and J. MacPeak.

Detroit, Mich.—The new garage of the Westminster Auto Co., at 71-75 Mott avenue, has been completed, and is open to the public. The company is under the same control as the Broadway Auto Co., of 36-40 John street, and will be under the management of C. S. Ross.

Leroy, N. Y.—The J. B. Preston Co., of Boston, Mass., is to locate in Brockport, and will be run in connection with the Niagara Rubber Co. This is a new concern, and will engage in the manufacture of a patented puncture-proof tire and other articles made of rubber.

New York.—The Park Avenue Livery Co. has been incorporated with a capital stock of \$5,000 to deal in horses. It will manufacture motor cars, carriages, etc., as well as operating a general livery business. The incorporators are Thomas Daly, J. L. Walsh and Sterling Pierson.

Toronto, Ont.—The Studebaker company has decided to open a branch in this city. Arrangements for the new enterprise is to be in the hands of Knight Neftel, who was in charge of the commercial exhibit in the recent show, and as soon as the local location of the company is definitely decided upon he is to act as manager of the concern in this city.

Eureka, Cal.—The Overland State Co. has been formally transferred by Mr. Cross, the former owner of the concern, to a corporation to be known as the Overland Auto Co., composed of Mr. Cross and several prominent citizens. A regular system is to be established between Eureka and Sherwood, connecting with all trains. The company is to use White steamers.

Pittsburg, Pa.—Application will shortly be made for a charter for the Belden Motor Car Co., of this city.

Newark, N. J.—Otto Reichardt and A. L. Pashly have formed a partnership and will open a repair shop at 3 Marshall street.

Denver, Col.—Thomas Botterill has taken a lease of the property on California street, near Seventeenth street, and will occupy it as a garage.

Denver, Col.—The Fernald Automobile Co. has taken a lease from the Walter S. Cheesman Realty Co. of one of the stores now in course of erection at Colfax street and Broadway.

Trenton, N. J.—James T. Graff, of Spring Lake, has filed a petition in bankruptcy, with assets of \$315, and liabilities of \$93,699.52. Mr. Graff has been conducting a garage business.

Sacramento, Cal.—Arnold Brothers have been compelled to enlarge their garage owing to the press of business. In future particular attention will be paid to the repair and machine shop. The concern has the agency for the White.

Chicago.—B. J. Dollins, for the past 2 years associated with the Continental Tire Co., has several his connection with that concern and is now connected with the Pennsylvania Tire Co. He is to act as traveling representative in the western district.

Trenton, N. J.—A permit has been granted to the Empire Tire Co. for the erection of a factory building at Clinton and Mulberry streets, to be used as an addition to the present tire manufacturing plant. The new chemical motor car now being manufactured by the Stanley Motor Carriage Co. is to be fitted with the Empire tire at



Wilmington, Del.—Maxwell Taximeter Co., capital \$500,000. Incorporators, R. C. Lupton, G. C. Harris and B. Lewis.

New York.—Hexter Taximeter Cab Co., capital stock \$109,000; to manufacture motor cars. Incorporators, P. K. Hexter, T. F. McDermott and M. Zabriskie.

New York.—St. Louis Automobile Car Co., capital stock \$20,000; to manufacture motor cars. Incorporators, L. A. Hopkins and W. S. Metas, the latter of St. Louis.

New York.—Herculeven Co. of New York City, capital stock \$50,000; to manufacture motors, engines, cars, etc. Incorporators, F. K. Felt, F. G. Goging and S. Gragan.

Cleveland, O.—Whitcomb Auto Livery Co., capital stock \$25,000. Incorporators, Max E. Meisel, I. S. Epstein and S. T. Haas.

Cleveland, O.—Magnetic Car Wheel and Truck Co., capital stock \$10,000. Incorporators, A. N. Tolmli, L. C. Thompson and John B. Linn.

Hammond, Ind.—Hammond Garage Co., capital stock \$5,000. Incorporators, John W. McMullen, E. C. Hawk and Thomas Lavene.

Boston, Mass.—Blair Fort Mfg. Co., capital stock \$100,000; to manufacture motor cars. Incorporators, C. Forth, W. Blair and F. C. Monahan.

Lansing, Mich.—John H. Brady Auto Co., capital stock \$10,000; to buy, sell, repair and store motor cars. Incorporators, John H. Brady, A. L. Stephens and Martin Borgman.

the request of the fire commissioners, as well as the White steamer patrol wagon.

Albany, N. Y.—The City Motor Car Co., of Mt. Vernon, has been incorporated with a capital stock of \$20,000.

Owego, N. Y.—The Owego Motor Car Co. is to erect a garage on Central avenue. A. L. Cole is to be manager of the company.

New York.—On May 1 the Isotta Import Co. is to remove from 12 West Thirty-third street to the Palmer & Singer building at 1620 Broadway.

Syracuse, N. Y.—The Kolbe Auto Co. has been incorporated with a capital stock of \$7,500 to manufacture motor vehicles by R. E. Kolbe, J. D. Buckmaster and F. L. Buckmaster.

Trenton, N. J.—M. C. Band, who for the past 5 years has been connected with the Richards garage, has been appointed manager of the Swift garage, of Greenwood avenue and Chambers street.

Elkhart, Ind.—The St. Joe Motor Car Co. has opened its factory at Main and Simonton streets with a force of fifteen men. This is the company which purchased the assets of the Shoemaker company, which recently went into the hands of a receiver.

Harrisburg, Pa.—The Harrisburg Taxicab and Baggage Co. is to open headquarters at Court and Strawberry streets, and will operate a general machine and repair shop and act as agent for the American Mora. The company has established a general taxicab system.

Newark, N. J.—Contracts have been awarded for the erection at 401 Clinton avenue of a two-story brick garage and dwelling. The first floor is to be devoted to the garage and repair shop, with living apartments on the second floor. The building is to be erected for William Rowdin.

Springfield, Ill.—The Cleveland Motor Car Co., of 1218 Michigan avenue, Chicago, has been incorporated with a capital stock of \$300,000, and will engage in the manufacture of motor cars and accessories. This is an Ohio corporation which has been incorporated under the laws of the state of Illinois.

Niagara Falls, N. Y.—The Ryder Patent Yarn and Mfg. Co. has bought 12 acres of land, and will at once commence the erection of a manufacturing plant, 600 by 80 feet. The concern manufactures rope, cordage, matting, fire hose, motor car tires, and other products from steel fibrous yarn. The company has a capital stock of \$325,000.

Olympia, Wash.—The Gesford Punctureless Tire Co., of Spokane, has been incorporated with a capital stock of \$500,000, and will manufacture tires under a patent granted to P. S. Gesford. Judge F. Van Norman, L. L. Park and Charles Holt are named as the incorporators. The company is to erect a factory at Akron, O., but the filing will be done in Spokane.



Legal Lights and Side Lights



RIGHT KIND OF POLICE

Chief of Police H. F. Dowling, of Oshkosh, Wis., is a charitable old soul, think motorists of that pretty city. They appreciate his efforts to make their path one of roses and clear away the thorns, or, perhaps, put balm in Gilead. The chief has issued orders to his officers to arrest on sight every person discovered placing anything on the streets which may cause damage to motor car tires. This includes bottles, tacks and all sorts of junk. Says the chief: "The mayor is endeavoring to rigidly enforce ordinances against speeding of motor cars and we have been ordered to keep our eyes wide open. But, in common with his honor, we all believe that the motorist is human, and he should not get the worst of it all around. There have been many complaints that motor car tires have been ruined by bottles and iron indiscriminately thrown on the pavement by absent-minded—or otherwise—people, and we are going to protect the motorist as well as the citizen."

"JOKER" IN OHIO BILL

With an innocent little clause snugly tucked away inside of one of the amendments, rendering impossible the lawful operation of speed traps in this state, the Ohio motor vehicle bill has passed the state legislature. The clause referred to is easily the most important in the bill, and provides that fast driving shall be prima facie evidence of recklessness, which is very good on the surface for the motor-hating individual; but it works out the other way, as it is impossible to secure a conviction if the road is perfectly clear while one is speeding. In this respect the bill is modeled after the Massachusetts measure, admittedly one of the best in the United States. The passage of this state bill really opens a new era for motorists in Ohio, and there was not one who did not welcome its passage. The bill in many respects is the same as other state measures, providing for registration with the secretary of state of all cars. Gasoline and steam machines are charged \$5 each, while electrics escape with the payment of but \$3. Commercial vehicles are not to be taxed at all. Manufacturers and dealers must pay \$10 under the new bill as an initiation fee and \$2 for every license they require. Motorists touring in from other states are to be allowed in Ohio for 10 days free, after that they will be compelled to take out a regular license. All surplus funds, estimated by the secretary of state and other authorities at something well over \$80,000, will be used for the repair and maintenance of roads in this state. The Ohio State Automobile Association is directly responsible for the

passage of this bill, Harry Vail, member of the legislative committee, and Secretary Hower having done much to further it, while a goodly percentage of the work has been done by C. J. Forbes, Jr., the new secretary of the Cleveland Automobile Club. The measure was drawn up by the O. A. A. A. and introduced by Senator Ward, of Cuyahoga county, who fathered the measure all the way through. The bill goes into effect 30 days after being signed by the governor.

OHIOAN RAISES NEW POINT

That the Ohio state legislature has no constitutional right to require motorists to stop at the wave of the hand was the contention of Attorney Ashton Coldham, counsel for John Huebner, who was defendant in a suit brought to recover \$20,000 damages alleged to have been sustained by Richard Ricketts, because Huebner's motor car ran into a buggy of Ricketts'. The suit was on trial several days this week in the court of Judge L. W. Morris of the common pleas bench. The attorney attacked the constitutionality of the Ohio law, contending it is class legislation and therefore invalid, because it requires drivers of motor cars to stop when a person driving or riding a horse waves a signal for him to do so, and does not place such restrictions on the drivers of any other kind of vehicle. Judge Morris held the law to be valid and constitutional, and the jury awarded a verdict against Huebner for \$1,250. The matter was later adjusted out of court and the entire proceeding wiped out without a final determination of the mooted point.

HOTCHKISS DEFINES LAW

The Massachusetts State A. A. held a meeting at the American house, Boston Saturday, at which Judge Hotchkiss, of Buffalo, president of the A. A. A., was the principal speaker. He was introduced by President Eliot C. Lee, of the state association. There were present delegates from all the clubs in the state and the gathering had at the meeting two ex-presidents of the A. A. A., and its vice president as well as its president, something unusual. These were President Hotchkiss, Vice President Lewis R. Speare and ex-President Eliot C. Lee and ex-President Harlan W. Whipple. In his remarks Judge Hotchkiss spoke on the prejudices that motorists have to combat at the present time, tracing them directly to the careless operator, and he said until that

factor was got rid of there would be no peace. He defined the four basic principles of motor law as follows: First, absolute identification; second, checking reckless operation; third, enforcing penalties; fourth, prohibition of local regulations. He said the motor vehicle had an absolute right to the highway, but that liberty was not license to do as one pleased regardless of the rights of others. He said the motor car came under the police power of the states, yet it was in a sense an interstate vehicle, and that a federal regulation was not unconstitutional. The present federal license law is not dead, not even sleeping, he said, but with the house so congested with legislation it would not be passed at this session. He said speed should be properly regulated, but not according to so many miles an hour, but rather according to the conditions governing the road and prudence in operating a car. Judge Hotchkiss outlined the bill now pending in New York and urged that the local clubs organize more strongly because only through organized effort was anything accomplished. He told what the A. A. A. was accomplishing, and gave a few facts about the Buffalo convention that will precede the Glidden tour. When he finished he was given a rising vote of thanks. Lewis R. Speare spoke briefly and W. H. Chase told what was being done toward arranging for delegates to attend the Buffalo convention.

RHODE ISLAND WRATHY

Rhode Island motorists are wrathful because of the motor bill that has passed the house in that state and is now up for consideration in the senate. In some ways it is patterned after the Massachusetts law, being a sort of compromise between the present Bay State law and the one that was just killed in that state. It provides a sliding scale for cars of from \$5 to \$25 with an annual registration fee of \$2. The speed limit is 20 miles in the country and 15 in suburban districts, with 10 miles in cities and congested districts. There is also a clause that states a driver figuring in an accident must stop and give his name, address and particulars. Twenty days are allowed for non-residents to stay in the state without registering. It was thought that the law would hit the rich New Yorkers who come to Newport in big cars every summer and tear up the road. They are a small minority of the motorists in Rhode Island, however, and instead of hitting them it will let them alone because they can get out of the state in an hour and may then return and not register at all during their stay. The Rhode Island club is planning to get busy with the senate and will try to have the bill killed there by the senators.

